

## FAR PART 150 STUDY UPDATE

Seattle-Tacoma International Airport  
Seattle, Washington



# Technical Appendix One

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Seattle-  
International Airport  
Tacoma  
FAR Part 150 Study Update

**Seattle-Tacoma International Airport  
FAR Part 150 Study**

**FINAL REPORT  
JULY 2002**

**TECHNICAL APPENDIX ONE  
Appendix One through Six**

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**Appendix One. CAC/TAC Members**

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**Appendix Two. Community Involvement Plan**

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# FAR Part 150 Noise Exposure and Land Use Compatibility Study

11/7/97

## Public Involvement Plan

### *I. Introduction*

This document presents a Public Involvement Plan to support the FAR Part 150 Noise Exposure and Land Use Compatibility Study. This is a two-pronged communications program aimed at both study participants and those audiences which may not attend many, if any, events. The plan includes a number of public information outreach activities to seek the input from the diverse constituency groups with an interest in Sea-Tac Airport.

This document is organized in five parts: Introduction, The Name, Participants and Audiences, Key Messages, and Communications Plan. This Public Involvement Plan is a working document intended to be updated as the project progresses.

Primary objectives of the communications program are to:

- Provide for quality, balanced public input to the Part 150 Update;
- Assure that the public has good information on which to base their input;
- Assure that the program is credible and defensible;
- Ensure development of a cost effective and balanced Noise Compatibility Plan.

The challenge of this Part 150 study is to build on the extensive existing noise mitigation program in creative and constructive ways, while remaining cognizant of physical, environmental, regulatory and fiscal constraints. Maintaining the credibility of this process within this complex environment is a particular challenge which can be met, in part, by providing opportunities for in-depth participation by a full range of Seattle area constituents. Our goal will be to make the process as "transparent" and productive as possible through outreach, dialogue, and good, clear information.

### *II. The Name*

The format name for this project is Federal Aviation Regulation Part 150 Noise Exposure and Land Use Compatibility Study. For the sake of simplicity, we propose to call it The Part 150 Noise Study Update.

### *III. Participants and Audiences*

Sea-Tac International Airport is a highly charged public topic subject to a myriad of opinions and perspectives. FAR Part 150 requires that the public be afforded the opportunity to comment on study recommendations and that comments be solicited, but there can be no regulation that guarantees complete satisfaction to all parties. Therefore, the first step in this process is to acknowledge that a clear distinction must be made between including the public in the process, which must be done, and satisfying everyone's desires, which cannot be done.

The participants and audiences for the Part 150 Noise Study Update are diverse. Those most directly impacted have a high level of understanding and interest in the Part 150 Noise Study, while those who benefit the most from the airport are sometimes among the least engaged. Each group is essential to assessing airport impacts.

For this reason the public involvement plan will begin by seeking a balance of participants: both geographical and interest based to assure that no one area or interest group is disproportionately represented. One of the first tasks will be to establish goals for the study, overall study policies, and a committee structure which includes guidelines for constructive and effective participation.

There are five categories of participants and audiences for this study. Participants are defined as those constituents with a high enough level of interest to join a Part 150 committee, while audiences are more likely to have an intermittent interest. Participants will come to meetings; audiences will need to be reached through special presentations, printed, electronic and audio-visual materials.

## Participants:

### *1. Surrounding Neighborhoods*

Neighborhoods comprise a core constituency of the Part 150 Noise Study, and can be an excellent grass roots source of information about airport impacts. These neighborhood participants and representative from municipal planning agencies will require fairly detailed information about the project, its schedule, rationale and opportunities for community input.

### *2. Transportation, Business and Similar Interests*

These groups have a direct interest in the successful operation of Sea-Tac Airport. They will have a high level of interest in this project and will be watching to assure that their interests are taken into account.

## Audiences:

### *3. Elected Officials*



Elected officials, at both the local and state levels are under constant pressure from both groups of participants listed above. It is essential that this group have accurate information that objectively assesses noise impacts, and an understanding of the limitations of potential outcomes.

#### *4. Media*

Media tend to follow controversy and define airport issues in those terms. The consulting team will create technically accurate, informative and graphically attractive information for the Port of Seattle to use with the media. Information will cover the study initiatives and results, and will emphasize the environmental benefits expected to result from implementation.

#### *5. Users*

The millions of visitors who pass through Sea-Tac Airport each year benefit most directly from the airport's operation, but they are a group that is transitory by definition. General media coverage is the surest way to reach this large and varied audience.

## *IV. Key Messages*

Key messages are designed to provide a clear and memorable impression of a program or project. They should support the strategic communications objectives of a program, and be stressed in a variety of ways in all communications about the program.

Three initial messages are proposed which should be revisited and updated as the project moves ahead.

- *The Port of Seattle is an industry leader in noise reduction programs and is continually seeking to improve the environment around Sea-Tac.*
- *The Part 150 Noise Study is a technical and objective assessment of noise impacts which will strive to achieve a program for improvements.*
- *The Study will involve and seek input from members of the community who have a keen interest and involvement in Sea-Tac planning issues.*

## *V. Communications Plan*

## Meeting and Committees

For committed participants a range of committees and opportunities to meet will be established.

### *Committee Structure*

The Part 150 scope contemplates an extensive series of public meetings, workshops and briefings with several constituent groups. Some of these groups already exist, while others will be created for this study. The following is an outline of a proposed committee structure with a definition of the composition of each committee and its role.

Committees include:

- Citizens Advisory Committee (CAC),
- Technical Advisory Committee (TAC) and
- Planning Advisory Committee (PAC) which is comprised of both groups.

In addition, three sub-committees of the PAC are planned. In order to reduce redundancy, maximize the efficiency of meetings, and insure the free flow of consistent information among all parties, the following structure for these groups and meetings is proposed.

### PAC - (CAC + TAC)

The CAC and TAC will each meet once individually at the study's beginning. Members will become acquainted with each other, Part 150 Study issues, the process contemplated, the study scope and the Public Involvement Plan. After the Part 150 Kick-Off Workshop scheduled for December 3, 1997, the two groups will join together to form the PAC and will occasionally meet jointly.

Since the CAC is already formed and has met for several months, their individual meeting will occur first on November 18, 1997.

The TAC will be formed over the next several weeks and will be comprised of a range of constituents involved with the airport including representatives from:

- Planning Departments from surrounding areas (Seattle, King County, Sea-Tac, Des Moines, Federal Way, Tukwila, Normandy Park, Burien and Mercer Island);
- Puget Sound Regional Council;
- Federal Aviation Administration (Tower Chief and Airports Division);
- Airlines (probably from the Air Transport Association and Alaska Airlines);
- Commuter airlines (probably from the Regional Airline Association);
- Cargo airlines (possibly the Air Freight Association);
- Tenants;
- Washington State DOT Aeronautics Division;
- Pilots;

- King County International Airport (Boeing Field);
- Greater Seattle Chamber of Commerce;
- Regional economic development organizations;
- Regional real estate organizations.

The TAC meeting will be coordinated with the Part 150 Kick-off Workshop probably also meet on December 3, 1997.

### *CAC/TAC Initial Meeting Agendas*

The agenda for the initial CAC and TAC meetings will cover similar topics and will set the tone for the study as a whole. For this reason it will be important to establish study goals, policies and ground rules at these first meetings.

#### Study Goals:

- Develop a shared vision among Port of Seattle and its surrounding communities regarding land use compatibility;
- Develop an understanding of probable future noise levels.
- Develop realistic mitigation plans within the context of historical and continuing programs, federal regulations and eligibility criteria and financial feasibility;
- Provide for meaningful constituent input leading to a realistic, effective, implementable and achievable noise mitigation program.

#### Policies:

- The proposed Part 150 noise mitigation program will improve the overall noise environment, not shift noise from one residential community to another.
- Programs which benefit a community without adversely affecting another community will be given priority.
- Programs for reducing the highest noise levels affecting people without adversely affecting another community will be given priority.
- The nighttime restrictions and noise budget program for Sea-Tac are not subject to revision, as doing so would open the prospect of weakening rather than strengthening them under FAA regulations. These noise reduction programs are the result of years of hard work by citizens from impacted communities.
- Programs subject to FAR Part 161 will not be part of this Part 150 Study Update.

- Operating capacity of the airport must remain unconstrained.
- The Part 150 Study Update will strive for “*a balanced approach producing realistic and practical solutions fair to both aviation and non aviation interests*”<sup>1</sup>.

**Committee Ground Rules:**

- The Public Advisory Committee will try to achieve consensus among all committee members; however, this is not required for a study recommendation to be adopted.
- The role of the committee members will be to provide input, review the work of the consultant team and provide comment on the study elements.
- The decision-making body is the Port of Seattle Commission.
- Committee members will accept the responsibility to attend meetings, read material and come prepared for productive discussion and interaction.
- The Port of Seattle and its consulting team will accept the responsibility to provide the committee with adequate notice of meetings and ample time to review technical material.
- Members will recognize the legitimacy, interests and opinions of others, taking time to listen to and understand comments from all participants.
- Members will share the committee time so that everyone has the opportunity to participate.
- When making public statements, members will speak only for themselves, not for the committee or for any other member.

***PAC Meetings***

Following the Kick-Off Workshop, six PAC meetings will be scheduled according to availability of technical material to be discussed. Thus, the PAC schedule will be linked to information production, and agendas will be determined by the latest available data. A project schedule including dates for the six future PAC meetings will be distributed to participants.

***Three Sub-Committees***

In order to provide participants with the option of concentrating on issues of specific interest to

them, sub-committees of the PAC will be formed. Part 150 Study topics lend themselves to division into three areas appropriate for sub-committee concentration. They are: close-in noise, farther-out noise and land use.

People interested in close-in noise, which includes such issues as take-off roll, reverse thrust, taxiing, and engine run-ups, are likely to be residents of nearby neighborhoods. In contrast, people interested in farther-out noise which includes such issues as adherence to flight tracks, take-off profiles and pilot technique, are likely to live in areas more distant from the airport. Land use issues are likely to be the primary interest of the municipal and planning agency participants.

Each sub-committee will be able to concentrate on its specific issues in more detail than the full PAC, and members will have access to full technical back-up data if they desire. Questions of a more technical nature will be more easily addressed in these smaller, more focused forums.

Members of the PAC will be able to choose which sub-committee, if any, they wish to participate in at the first CAC or TAC meeting, whichever they attend. Thereafter, the three sub-committees will all meet on the afternoon prior to the evening PAC meeting. The three sub-committees will be charged with reporting on their activities, discussions and consensus recommendations to the full PAC meeting that evening. In this way PAC members who are unable to attend the afternoon sessions will be able to keep up with sub-committee activities, and all PAC members will be informed of the work of all three sub-committees.

#### *Four Workshops*

Workshops will reach a wider audience than committee participants. Area residents, public officials, airport users, and others with an interest in airport activities may attend these occasional events. To encourage broad participation in workshops, notices will be widely disseminated via newspapers, mailings, a web site and other media as appropriate.

Four workshops are planned during the course of the study.

*Workshop #1 - Project Kick-Off*  
December 3, 1997  
Highline High School  
4 to 8 PM

**Purpose:**

- announce the beginning of the study
- solicit comments on noise issues of concern
- describe the Part 150 process
- describe the topics to be studied

**Announcement:**

The workshop will be announced by advertisements in local papers, as well as by flyers distributed to a consolidated mailing list assembled from existing Port of Seattle lists.

**Format:**

The workshop format will be informal, with several stations or tables featuring information boards and staff grouped around topic areas. Members of the public will sign in at the entrance and be given a package of material describing the study and the workshop format. At each table there will be comment sheets available to be filled in on the spot or mailed back later.

**Tentative Station Topics:**

**What is a Part 150 Study?**

- Purpose
- Elements
- Schedule
- History of Part 150s at Sea-Tac
- Study Goals

**Study Topics**

- General study scope
- Specific concerns
- Solicit comment on specific noise problems such as:
  - Time of day
  - Departure/Arrival
  - Ground noise
  - Learning
  - Sleep interference

**Study Participants**

- Port of Seattle
- FAA
- Consultant Team

Public Involvement Plan

- Description of committee structure
- Definition of committee roles
- Information on participation

A separate area or room will be set aside for the Noise Monitoring System study, its results to date and its relationship to the Part 150.

*Tentative Topics for Workshops 2 - 4*

*Workshop #2:*

Baseline conditions, forecasts, noise monitoring program.  
Results of noise monitoring program, current and future contours, and land use data.

*Workshop #3:*

Noise compatibility plan, alternatives, recommendations, financial strategies and implementation schedules.

*Workshop #4:*

Results of alternative analysis and preliminary recommendations.

*Public Hearing*

The study will culminate with a public hearing where the Part 150 recommendations for noise and land use mitigation will be presented and comments solicited. This event will be widely publicized through mailings, media and the web site.

*Ten Special Briefings*

For audiences who are less likely to attend meetings and workshops, or who might be encouraged to attend certain events if sufficiently motivated, a special series of briefings is planned. These audiences are likely to be airport users (business people, travel agents, shippers and travelers), elected officials who have a continuing interest in increasing both the operational and environmental efficiency of Sea-Tac and small neighborhood groups. The major message to these groups is the Port of Seattle's continuing effort to lead the industry with a balanced and cost effective Noise Compatibility Program. Specific topics would include such items as: the Port's acquisition program, aircraft climb profiles and other initiatives. These briefings will typically be scheduled close to PAC meetings or public workshops and will cover similar material in an abbreviated and more targeted format.

*Five Inter-Agency Briefings*

As the Part 150 Study recommendations develop, it will be prudent to make sure that a variety of

government entities not directly involved with the process are informed of its progress and results. For this purpose, five briefings will be scheduled for environmental, planning, transportation agencies at the state and regional level as appropriate. These meetings can also be integrated into the SEPA process to the extent possible.

#### *Special Briefing to Port of Seattle Commissioners*

Port of Seattle staff will keep the Commission apprised of the Part 150 Study Update throughout the process. In addition a formal presentation to the Port of Seattle Commissioners is expected to occur as recommendations are developed. This briefing will be accompanied by hand outs and graphics appropriate to the specific topics discussed. This meeting may be used to gain final acceptance of the plans and reports, and will be integrated into the SEPA process to the extent possible.

### Printed, Presentation and Electronic Materials

In an effort to provide information for audiences who do not attend meetings, a series of materials will be provided. These include a brochure and four newsletters, an audio-visual presentation and a web site. All Part 150 Study Update materials for public distribution will be approved by the Port of Seattle Public Affairs office.

#### *Study Brochure*

An attractive brochure will be prepared providing information on the Part 150 study goals and objectives, schedule, and general information about how the public may be involved. Distribution will use a variety of available mailing lists, and the brochure will be available for meetings, workshops, briefings, and the media. One thousand copies will be printed.

#### *Newsletter*

Four editions of a Part 150 Study newsletter will be written and distributed by mail and at meetings, workshops, briefings and to the media. The newsletter will track the study as it progresses covering the technical work in an accessible manner including graphics and photos whenever possible. All the issues involved with land use, close-in and farther-out noise will be covered including baseline and projected data, present and future noise levels and the mitigation program once it is developed.

#### *Audio-Visual Presentation*

The special and inter-agency briefings will often be accompanied by an audio visual presentation. This presentation will be used by members of the Port of Seattle staff for outreach to multiple organizations and groups in the Seattle area.

In addition to the special briefings, the consultant team will arrange for up to ten presentations by Port of Seattle staff at regularly scheduled meetings of targeted organizations.



### *Public Information Package*

An information packet will be prepared for each workshop. This packet will contain a brief summary of significant findings and progress of the study to date. Maps, graphs, tables and other materials will be attached, as warranted.

This material will also be used at the Special Briefings, Inter-Agency Meetings, presentations and with the media.

### *Project Workbooks*

For members of the PAC, a standard three-ring notebook will be provided for use during the study. The workbook will contain sections for inserting a list of committee members, working papers, notes, graphics and other pertinent information.

### *Pilots' Noise Abatement Notice*

Once the Part 150 recommendations are adopted, the consultant will prepare 1,000 Noise Abatement Notices specific to Seattle-Tacoma International Airport for inclusion in the Jeppesen Manuals used by pilots. These notices describe in aeronautical terms exactly what is expected as noise abatement procedures and techniques.

### *Web Site*

A web site will be created to disseminate a variety of material. Its primary purpose will be to include the noise measurement data for the segment of the public interested in this technical material. Noise measurement survey data in its complete form will be presented on our interactive Web Site. This will allow the interested public the opportunity to view the noise and flight track data. Both summary and raw data will be presented, except that which is considered confidential per the Memorandum of Understanding between the FAA and the Port concerning the uses of flight track data.

In addition, other public information material such as newsletter articles and meeting notices can be posted on this site.

**Appendix Three. Minutes of CAC/TAC & Subcommittee Meetings**

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## Sea-Tac Part 150

### Study Data Subcommittee Meeting

January 13, 1999 Minutes

**Attendees:** Guy Spencer, Jim Combs, Rose Clark, Dick Haferbecker, Arden Forrey, Ron Seymour, Robert Kikillus, Bob Wells, Bob Brown, Mary Vigilante, Ryk Dunkelberg and Paul Dunholter.

**Handouts:** Agenda, Actions Suggested by Operations Subcommittee.

Ron Seymour opened the meeting and stated that the purpose of tonight's meeting was to continue the discussion on determining the best use of data to meet the requirements of the Operations Subcommittee. He then turned the meeting over to Mary Vigilante who initiated discussion on the handout which presented a list of actions from the Operations Subcommittee.

The Operations Subcommittee suggested the following measures for evaluation; Departure and Arrival Profiles, Fly Quiet Program, Ground Run-up Locations/Aircraft Positions/Regulations, Ground Run-up Enclosure/Hush House and Investigate New Flight Corridors. She stated that the Data Subcommittee would help identify the types of data to be used to help evaluate the operational measures to determine the success of the measures at achieving the stated goal(s). She then turned the meeting over to Paul Dunholter to go through the various measures suggested by the Operations Subcommittee and the consultant teams recommendations as to the type of data to evaluate to determine the success of any specific measure.

The first measure discussed was Departure Climb Procedures. Paul Dunholter stated that the FAA has allowed each airline to develop two specific departure profiles for each aircraft type; a Distant Departure Procedure and a Close-in Departure Procedure. These designations refer to the process the pilot uses in power and flap adjustments. Typically, the Distant profile causes lower noise levels at locations further from the airport and the Close-in profile causes lower noise levels for locations located close to the airport. These profiles are discussed in AC 91-53A. Currently, the Distant departure procedure is the standard departure procedure across the country and the one that is used at Sea-Tac. Paul Dunholter presented a graph which depicted the two profiles, identifying the altitude differences at various distances from the point of rotation. The major difference was between one and five nautical miles from rotation, which is the point on the runway where the plane begins to lift off the pavement. Within this distance, the Distant procedure was higher and the Close-in was lower. More power was applied for the Distant and less power for the Close-in. He suggested that we compare both SEL and DNL at various receptors for both procedures.

Bob Brown asked if the receptors would be side line or just extended center line. Paul Dunholter replied that they would be both. Jim Combs asked if the receptors would indicate where key aircraft turns occur in order to see which procedure is best when turns are made. Paul Dunholter said that all sites would be used for comparison. Jim Combs asked why at four and one-half to six miles there was a less steep climb and could that be adjusted. Ron Seymour stated that it was due to aircraft design, power and flap management, and that the actual departure was a stair step type of departure and not a constant steep climb. It was also noted that Air Traffic Control holds down departures on some tracks within 12 miles of the airport to enable arrivals to operate at

higher altitudes . Bob Brown commented that Stage III aircraft make less noise because they make a steeper climb with less power. Paul Dunholter stated that a change in power gives greater benefit than a change in altitude. He also stated that John Wayne Airport uses a hybrid of the Close-In Departure Procedure and it is the only airport in the country to use this hybrid procedure.

Paul Dunholter discussed the Table on page 7 as an example of what we would produce. The following suggestions were made by the subcommittee:

- Use miles instead of feet for the distance column.
- The distance calculation should start at the point of take-off roll to be consistent for both north and south departures.
- Try to include some type of marking on the graph to show the end of the runway and the end of Port property.
- Use a double scale to indicate both north and south departures on one graph.
- Include some notation that indicated the "effects to people" on the table. This could be an SEL reference table, a perceived change as it relates to the dB change.

Rose Clark said that we might want to recommend certain building materials to achieve sound attenuation. Ron Seymour answered that this will be done as part of the Land Use Subcommittee evaluation of insulation requirements based on noise exposure. Paul Dunholter explained that the graph on page 8 was for one aircraft only and Arden Forrey suggested we look at representative aircraft for a class of all aircraft.

Paul Dunholter then presented data on evaluating Aircraft Arrival Profiles. The graph on page 10 showed several different approach paths, with the center being a 3 degree slope. The table on page 11 showed how aircraft altitude during good weather and bad weather could change the SEL and DNL at the receptors. The good weather/bad weather distinction related to how far from the airport the aircraft intercepted the glide slope. In bad weather the interception point was further out. Some discussion on what "bad weather" and "good weather" really meant followed. Bob Wells suggested that it is really visual meteorological conditions and instrument meteorological conditions, and that it is also related to capacity of the runway system. Paul Dunholter stated that he wanted to evaluate if it makes a difference where aircraft are in relationship to the three degree glide slope. Bob Brown suggested we tag flight above, on or below the glide slope, regardless of weather. Guy Spencer requested that we add to the table some information on how the changes would effect people.

Paul Dunholter then presented information of Ground Run-ups. He suggested evaluating such things as Lmax or peak noise, and using both a-weighted and spectral data for evaluation. The spectral data would be low frequency data . Run-up contours are being generated. Guy Spencer asked the difference between A and C scales. Paul Dunholter stated that the 65 dBC contour would be very big and that the 70 dbC is about the same as the 65 dBA. Guy suggested we look at the 65 dBC just for comparison and see how big it is. Paul Dunholter stated that there was no direct data on C weighted noise and how it affects people. Arden Forrey stated that we must think in terms of how data will be used by the communities and to pass on to both other subcommittees to think about what they what the data for and what will they do with it.

Paul Dunholter next discussed the Hush House information. He recommended using Lmax and Spectral data along with population data to determine effectiveness of a facility. Population could be expressed in terms of newly exposed and continued

exposed. At the present time a Hush House facility is planned to go in the South Aviation Support Area (SASA) at some future date. Jim Combs suggested that we overlay both sets of contours, with a hush facility and without a hush facility, for easier comparison. Also, could we look at two facilities facing each other to accommodate winds? This can be taken into consideration, but it is highly unlikely that it will work or that Sea-Tac would have the space to accommodate the structure. Paul Dunholter explained that a facility could be used up to a five knot tailwind. Guy Spencer asked if there is sufficient room at the north end of the airport and it was stated that probably not. Guy Spencer also requested a cross section of the facility. Paul Dunholter stated that the same data analysis would be used for the Hush House as for the Ground Run-ups.

Paul Dunholter then discussed New Flight Track information. The goal would be to minimize the people affected. Arden Forrey asked the source of the population data. Paul Dunholter stated that it varies with distance from the Airport, with more detailed information closer to the airport and more generalization farther from the Airport. The data contains census information on not only number of people but socioeconomic information as well. Arden Forrey suggested that the Standard Land Use Coding manual could be used to determine more definitive land use categories. Guy Spencer and Jim Combs both suggested that we develop a map with no noise sensitive land uses and one with all types of noise sensitive uses to help evaluate best flight track positions. Bob Brown also suggested that we include the FAA criteria for significant change, 1.5 DNL. It was suggested that we add health effects to the data information table. Jim Combs also suggested that we develop a map, with the best data we have, to show what the tracks were before the Four Post plan. Ron Seymour stated they could do that but that it would be very rough. Arden Forrey asked if there was a number of flights above a certain SEL that we could use. Paul Dunholter stated that it would be useful and he would look into it.

Paul Dunholter then discussed the Fly Quiet Program and the elements that could go into such a program. It was really a catch-all of things to get aircraft to operate in a quiet and efficient manner. Jim Combs asked what the FAA "flag" level was, how many feet below the glide slope can you deviate before FAA radar will flag a flight. We did not know the answer, but would try to find out. Guy Spencer stated that it would be better if we could provide incentives and it was stated that this was the goal of the program, to use a carrot instead of a stick as much as possible.

Paul Dunholter then discussed the Flight Corridor Compliance evaluation and stated that a sample data report was included in the handout. The goal was to develop a metric to use for evaluation and a was to establish a threshold for compliance; i.e., inside or outside the corridor. Arden Forrey suggested that the subcommittee be given a presentation on the capabilities of the new noise monitoring system and where the sites are.

Jim Combs requested that the Port make a presentation at the next CAC/TAC meeting concerning a recent news article concerning a Highline School District insulation study. Ron Seymour indicated that he would investigate this.

Dick Haferbecker stated that Alaska Airlines were in internal discussions on how to provide flight tests to evaluate the results of the Distant and Close-in departure procedures. He thought they could work it out for some flights.

***Things to do:***

- Present the requested data to the Operations Subcommittee for evaluation.
- Develop a map showing flight tracks before the Four Post Plan.

- Arrange for a discussion on the new noise monitoring sites at the next full committee meeting.

**Sea-Tac Part 150 Study  
Land Use Subcommittee Meeting  
December 9, 1998  
Minutes**

*Attendees:* Stephen Kiehl, Joanne Schaut, Guy Spencer, Richard Kennedy, Jim Combs, Rose Clark, Craig Ward, Loyce Saar, Scott Greenberg, Ron Seymour, Robert Kikillus, Rachel Garson, Bob Wells, Diana Ducroz, Eric Tweit, Ryk Dunkelberg

*Handouts:* Agenda, Draft Topics for Consideration, FAR Part 150 Required Alternatives for Evaluation (B150.7b), PSRC Requirements for Evaluation (Resolution A-96-02), Evaluation Measures Identified by the Public Through Open Houses, Categorization of Part 150 Actions, CAC and TAC Member Subcommittee Membership Roster, 1998-1999 Meeting Planner

Ron Seymour opened the meeting by having everyone introduce themselves. Ron Seymour began the discussion by raising the question of whether the Subcommittee would like to have a committee chairperson. Possible choices would be from the Subcommittee or, if committee members felt comfortable with it, someone from the consulting team or Port could take on this role. Guy Spencer expressed that it would be more appropriate to have a facilitator versus a chairperson since the committee structure was such that there was no voting rights of the committee. Guy Spencer recommended that this role could be taken on by a member of the consulting team or possibly an outside facilitator. Rose Clark felt that a chairperson would be helpful and would be preferable. The chairperson could work with the consultants on committee meeting management responsibility. Joanne stated that a focal point or facilitator was important but that a subcommittee member may not feel that he or she would be able to enter into the discussion freely due to meeting management.

Discussion took place and it was determined that members would contact Ryk Dunkelberg with their views or recommendations for a committee chairperson or facilitator. Ryk Dunkelberg will then compile this information and advise the members of the information. A decision would be made prior to the next meeting. Ryk Dunkelberg requested to have the ideas and suggestions to him by the first of the year.

The members were also asked to consider the need for specific ground rules due to the potential controversial topics to be discussed by the committee. It was discussed and determined that meeting times and location would remain the same., but if there were significant conflicts, especially with community staff, then some meeting times could be changed to accommodate specific needs.

Ryk Dunkelberg then presented the agenda for the meeting. First on the agenda was a discussion on land use topics identified in other committee meetings, open houses, correspondence and as required by Part 150 as well as the PSRC Resolution. Ryk Dunkelberg then asked if there were any additional topics from the members. Guy Spencer suggested adding public outdoor open space/historical buildings to the land uses evaluated within the Noise Remedy Boundary. It was also suggested by Guy Spencer that we consider closed ventilation systems when we talk about sound insulation packages. Suggestions were made that the committee should work with the local jurisdictions to establish a common set of sound attenuation guidelines. It was also suggested that a pamphlet be developed and made available that would list manufacturers of sound insulating building materials and a list of contractors familiar with doing sound attenuation construction on residences. It was stated that this would be particularly helpful for "do it yourselfers".

Bob Wells then discussed the Approach Transition Zone considerations and what it entailed. The requirement to evaluate Approach Transition Zone alternatives was part of the Record of Decision for the third runway SEIS. The Part 150 Study was tasked with considering what to do with the properties within the designated areas and to work with the jurisdictions, mainly the City of Burien and the City of SeaTac, concerning future land uses within this area. Issues to consider include whether or not the residential property should be purchased, what are the desires of the residents that live in this area, tax base considerations, FAA requirements for funding and eligible uses, comprehensive plan compatibility, and surrounding land use compatibility. Craig Ward stated several issues that concerned him regarding this topic: when would we get clarification on Port's requirements for resale of property from the FAA (still trying to get that clarification, don't know for sure), noise is only one of several components (ground safety, pilots/passenger safety) and how do we make a generic land use recommendation? He also specifically addressed the deficiency of the existing Part 150 Study regarding relocating mobile home parks, and noted that this need would likely expand under the third runway Approach Transition Zone, as it includes a mobile home park in Burien. Steve Kiehl concurred with Craig Ward that there are other items besides noise that will impact our decision, such as safety.



Bob Wells stated that we should use the Part 150 process to move the discussion forward and identify any roadblocks to a recommendation. If the local jurisdictions do not want to see conversion from residential to another use, then what? A recommendation that says work with the jurisdictions to work together to something prior to the runway being operational or wait until the next Part 150 after the runway is operational were mentioned as possibilities.

Jim Combs asked what the Port expected the subcommittee to do on this topic. Bob Wells replied that it will depend on what the citizens think and what the future land use will be. Jim Combs questioned if it would be some kind of recommendation concerning the issue? Bob Wells replied yes.

Ron Seymour stated that one reason that this issue was delegated to the Part 150 Study was due to the small community response from the residents that live in these areas on this issue during the EIS process. There was a concern from the EIS Team that the residents may have not understood the issue and it should be pursued further in the Part 150.

Guy Spencer asked who would receive the increase in value of property (commercial over residential value) if the property is purchased and will the Port pay the residential owner value for commercial property? Bob Wells stated that this was a very good point and that it was something that would have to be discussed in the committee and with the FAA, however, at this point a determination could not be made.

Rose Clark asked if this type of issue had ever been addressed at another airport, and if so, is there data we can use to aid in our decision. Rose Clark also asked if the property is commercially zoned and it changes, does the jurisdiction get the benefits? Along this same line of questions, Guy Spencer asked if the Port owns the property and leases the space, who gets the tax benefits?

Bob Wells stated that a lease hold tax is intended to replace property tax and is paid to the county assessor, maybe not a one for one exchange.

Steve Kiehl commented that PSRC is doing an initial review of all land use plans to look at future land uses within the 65 DNL contour and what the jurisdiction are planning now. They will have an estimate of the number of people within the 65 if all development is completed as shown on the comprehensive plans. This should be ready for public review early next year.

Ryk Dunkelberg asked the subcommittee to prioritize the land use issues identified so as to aid in the evaluation process. After discussion, the items were initially prioritized in the following order mobile homes, approach transition second, multi-family third and public buildings fourth. Joanne Schaut recommended that assisted living facilities be considered under the public building category.

*Things to do:*

- Put jurisdictional boundaries and existing land use on the Approach Transition Area map
- Get more information concerning tax consequences in Approach Transition Area for various ownership alternatives.

# Sea-Tac Part 150 Update

## Land Use Sub-Committee

March 2, 1999

### Meeting Minutes

#### Attendees:

Holly Anderson (City of SeaTac), Rose Clark (City of Burien), Jim Combs (City of Seattle), Paul Johnson (FAA), Stephen Kiehl (PSRC), Cayla Morgan (FAA), Rob Odle (City of Burien), Loyce Saar (City of SeaTac, Mobile Homes), Guy Spencer (City of Normandy Park), Erik Tweit (City of Seattle), Jeff Fitch (POS), Rachel Garson (POS), Robert Kikillus (POS), Pat Proulx (POS), Ron Seymour (POS), Bob Wells (POS), Claire Barrett (Claire Barrett & Associates), Steve Cleary (O. R. Colan Associates), Bob Merryman (O.R. Colan Associates), Ryk Dunkelberg (Barnard Dunkelberg & Company), Mary Vigilante (Synergy Consultants).

#### Handouts:

Agenda. Mailed in advance were Meeting Notice, Land Use Options Outline, 1994 Part 150 Mobile Home Recommendation, City of SeaTac Mobile Home Park Relocation Standards

#### Introduction:

Ron Seymour, Port of Seattle, opened the meeting and asked for everyone to introduce themselves.

#### Mobile Homes:

R. Dunkelberg began by briefly describing the paper sent to the committee in advance of the meeting. He discussed the presentation format, which is consistent with the format used in the Operations Sub-Committee, and emphasized that this material is meant to be updated as new information becomes available.

Included in the mailing was a copy of the mobile home policy developed in the last Part 150 Update, which created a voluntary relocation program and a one time payment for residents to assist with the relocation. This program had four components:

1. The mobile home park owner wishes to convert the property to a different use.

2. The local jurisdiction requires the owner to develop a relocation plan for existing residents.
3. The property owner accepts an easement requiring any reuse to be compatible with the Airport, and that any funds received from the Port of Seattle are given to residents for relocation.
4. The local jurisdiction agrees to restrict future development to compatible land uses.

In the intervening years, no mobile home park owners have taken advantage of this program. However, since this program was approved, several localities have developed mobile home relocation plans, and the state has also instituted some requirements.

Loyce Saar commented that the amount of money allocated in the existing program is insufficient for people to relocate. Rose Clark asked whether the land would remain on the city tax rolls, if relocation did occur. Bob Wells replied that under the existing program, land would not be acquired by the Port and would remain in the original jurisdiction.

R. Dunkelberg then introduced Bob Merryman, who has experience around the country relocating mobile home residents, for a description of options and experience in other places. Merryman began by explaining why mobile home relocations are unique and complex:

- They involve multiple owners - one for the land, and typically a different owner for the dwelling.
- There are a range of resident income levels – some which offer few alternative housing options.
- Many localities have restricted the creation of new mobile home parks limiting relocation options.
- Openings in existing parks are likely to be fewer than the number of people desiring spots.
- Moving many mobile home residents simultaneously creates a glut of "buyers" in an already limited market raising prices.
- Other low cost housing is limited.
- Seattle is a relatively high cost residential area.

Bob Merryman also described some of the features of the Uniform Relocation Act, a federal law governing all relocations of this nature and some of its stipulations and restrictions. He also mentioned some other possible partners in an effort to relocate mobile home tenants. These include local and county housing authorities and the federal Section 8 housing voucher program.

Guy Spencer asked whether rent subsidies in the form of Section 8 vouchers, if available, had a statutory limit. He was told that they did – a limit of 42 months. After that time, it is unclear what happens to recipients who cannot cover costs themselves. Another question concerned rent increases at relocated parks, if a new mobile park location is found. The answer given was that there were no controls over rent increases once the subsidy program, if applicable, has ended.

Robert Odle asked about the reaction of people who had been relocated in programs at other airports. Bob Merryman responded that certain categories of people tended to be more satisfied than others. Those, who by virtue of buy-outs and relocation payments, could manage a down

payment on a traditional home were the happiest. Similarly elderly people who were relocated to adult care facilities also fared well. Others subject to higher rents, longer distances to work, or other changes may not be so pleased.

Loyce Saar pointed out that relocation can take time. During that period, existing mobile home parks become more sparsely populated causing safety problems. Many residents are elderly and vulnerable making this issue even more important. Jim Combs asked if it was necessary to wait until the end of this Part 150 Update to change the existing program. Cayla Morgan replied that in order to access FAA money for the relocation, an approved Part 150 program would need to be in place. Bob Merryman added that once approved, any program would be phased due to the difficulties of finding relocation opportunities as listed above.

Holly Anderson commented that the variety of possible relocation and subsidy options is encouraging. Robert Odle asked why the last Part 150 program was voluntary. Ryk Dunkelberg replied that there were, as always, limited funds, and the priority was to extend the single family sound insulation program at the time. The thought was that mobile home relocation was best handled when the park owner was in agreement.

A general discussion followed about people's desire to continue living in mobile homes. Loyce Saar said that if the parks were well maintained, it was a desirable life style, but several current parks are poorly kept. She also said that although some people would not mind a distant move to other available locations, that was probably not true for all current residents.

Ryk Dunkelberg pointed out that several local communities no longer allow new mobile home parks. Loyce Saar added that one of the allowable sites in SeaTac is next to a large highway and is far from stores and services. Robert Odle added that a more complete understanding of the options, as well as the situation and choice of residents, is necessary.

Mary Vigilante reminded people that we do not have a final noise contour yet, so that eligibility boundaries may change. In addition changes recommended by the Operations Sub-Committee may shift the contours, so that no recommendation can be made until all the study information is available. Steve Kiehl also pointed out that a more complete understanding of the scale of a potential program and its costs is necessary.

This section of the meeting concluded with general agreement that relocation of mobile home residents within the eligible contour would be desired by the committee, however, realistic options need to be explored more completely before a decision can be made by the Port. The consultant team will continue to look into this issue to see if a program can be developed or not.

#### **Approach Transition Zones:**

Mary Vigilante indicated on a map the approach transition zones (ATZ) for the new runway, which were determined in the Master Plan Environmental Impact Statement. She reminded people that in the past, the Port of Seattle has established 75 DNL as the standard for property acquisition. For the new runway, 75 DNL will remain on Airport or in the runway protection zones, which will be acquired in any case.

Houses remaining in the approach transition zone would be eligible for sound insulation. In addition the Port discovered an FAA criterion regarding low flying aircraft, which allows acquisition of property beyond the runway protection exposed to low flying aircraft. This possibility is being investigated, as the new runway will be primarily for arrivals, and the ATZ may qualify.

One of the outstanding issues is re-use of acquired land. Steve Kiehl stated that PSRC is concerned that any reuse be a compatible land use, which may require rezoning from residential to more appropriate uses. Guy Spencer questioned the desirability of the Port benefiting from rezoning to a higher value commercial use. The ATZ issue will be discussed in greater detail at a future meeting.

The meeting ended with the announcement that both current and future contours would be available for discussion at the next meeting, and that these land use issues would be addressed again at that time.

**Sea-Tac Part 150 Study  
Land Use Subcommittee Meeting  
May 12, 1999  
Minutes**

*Attendees:* Stephen Kiehl, Joanne Schaut, Guy Spencer, Richard Kennedy, Jim Combs, Loyce Saar, Paul Johnson, Cayla Morgan, Holly Anderson, Glynis Casey, Lynae Jacobson, Ron Seymour, Robert Kikillus, Eric Tweit, Ryk Dunkelberg and a guest, Mike McCoy

*Handouts:* Agenda, Draft Topics for Consideration

Ron Seymour opened the meeting by announcing that the three contour sets (1998, 2004 and 2010) have been generated and are being transferred to maps. They will be available at the CAC/TAC meeting and Open House next week. He then reminded everyone that the CAC/TAC meeting would be next Wednesday, May 18 and the Open House would be the following day. He then turned the meeting over to Ryk Dunkelberg who went through the remainder of the Agenda.

Ryk Dunkelberg began the discussion by identifying what analysis was being completed for the contours. Noise sensitive facilities are being identified within the different contour maps. These facilities include mobile homes, multi-family residential structures (owner occupied and rental), as well as public use facilities. To date, the number of mobile home parks and mobile homes have been identified within the existing and 2004 contours. The number of multi-family (owner occupied) residential structures has also been identified within the same contours. Ryk stated that these were identified through the telephone directory and by driving the area. All multi-family structures that were for rent or lease were eliminated from consideration as owner-occupied. Ryk stated that no analysis has been initiated on rental units yet and that owner-occupied units are being considered first simply because a pilot project for owner-occupied structures was completed under the existing Part 150 Program. Ryk then presented the number of convalescent facilities within the existing and 2004 contours, again concentrating first on these public facilities because a pilot project for a convalescent home was also completed under the existing Part 150 Program.

At this time a discussion concerning funding priorities for different land use types was entered into. Several suggestions were made for items to be considered when

developing funding priorities. These included: using Port and FAA money where there are no other sources of funds (look at ways to deal "outside" FAA constraints), consider highest noise contours first (75 and 70 DNL), consider facilities where people spend the most time (houses, convalescent homes, schools), consider the ability to attenuate structures and address those structures that cannot receive sound attenuation. A discussion followed concerning owner-occupied versus rental-occupied multi-family structures. The discussion centered on if there should be any distinction between the two types of multi-family housing in terms of noise mitigation measures or priorities. It was suggested that the Port and Consultants investigate what other airports are doing. Mike McCoy, an owner of a multi-family rental unit stated that rental units should be considered the same as owner occupied units because the residents are the ones being impacted by noise and we should be helping them, not the type of structure. Joanne Schaut agreed, as did others, and it appeared that the consensus of the group was to treat all multi-family structures the same.

Guy Spencer suggested that if we combine the two goals of addressing the highest contours first along with the types of structures where people spend most of the time, we would achieve a workable priority list. Steve Kiehl suggested, as an example, acquiring mobile home parks within the 70 DNL contour and insulating multi-family within the 70 DNL as a high priority (all single family homes that desire to be insulated and are eligible will be insulated by the end of this year). Others suggested, as a starting point, that residential structures and convalescent homes be first priority, schools second, hospitals third, fire stations fourth, then libraries and municipal buildings. It was noted that this was just preliminary and not a final suggestion.

Richard Kennedy stated that the wording under Action I.7 concerning the statement that "It is desirable that each community develop their physical plans and policies to be compatible with aircraft noise levels" was misleading in that to do so, the communities had to have some finality in the noise contours. What may be compatible one year may not be if new facilities are developed with changes in noise contours. It was agreed that it is easier for communities to plan when there are final contours. Ryk Dunkelberg reminded everyone about the CAC/TAC meeting and Open House next week, and urged everyone to attend.

*Things to do:*

- Port and Consultants would investigate how other airports treat owner versus rental occupied multi-family structures.



- Port would investigate if there are industry wide standards concerning what level of sound attenuation an average mobile home achieves, as compared to conventional single family home.

**Sea-Tac Part 150 Study  
Land Use Subcommittee Meeting  
October 14, 1999  
Minutes**

*Attendees:* Stephen Kiehl, Joanne Schaut, Guy Spencer, Craig Ward, Arden Forrey, Rose Clark, Rob Odle, Corbett Lock, Jim Combs, Loyce Saar, Paul Johnson, Cayla Morgan, Lynae Jacobson, Ron Seymour, Robert Kikillus, Eric Tweit, Ryk Dunkelberg, Mary Vigilante and a few guests.

*Handouts:* Agenda, Land Use Outline

Ron Seymour opened the meeting and asked everyone to re-introduce. He then stated that FAA representatives were here to present information concerning the Approach Transition Zones. A member of the subcommittee had requested them to give the presentation. Ron then turned the meeting over to Paul Johnson of the Seattle ADO.

Paul Johnson then distinguished between Runway Protection Zones (RPZ) and Approach Transition Zones (ATZ, sometimes referred to as Approach Protection Zones). He stated that the RPZ's associated with the runways at SeaTac were trapezoids at the ends of the runway. The RPZ started 200 feet off the end of the runway, was 1,000 feet wide, extended 2,500 feet along the extended centerline of the runway and was 1,750 feet wide at the end. The purpose of an RPZ is to protect persons and property on the ground and the FAA prefers that the airport own and control the RPZ. No fueling facilities, congregations of people, no wildlife attractants and no residential units are allowed. Along and both sides of the extended centerline of the runway in the RPZ is the Object Free Area. Anything within the OFA must be below the elevation of the runway itself, so it must be free of all structures. It is an area 800 feet wide and 800 feet long, within the RPZ starting 200 feet beyond the runway end. A handout was presented with a drawing that presented these dimensions of the RPZ and ATZ for ease of discussion.

The Approach Transition Zone (ATZ) is beyond the RPZ and is essentially 1,250 feet wide along the extended centerline and 2,500 feet beyond the RPZ. FAA does not encourage airports to own the ATZ, but it is eligible for Federal participation. Within the ATZ is an area identified as the extended object free area. This the some width as the OFZ in the RPZ which runs the entire length of the ATZ. The extended OFA

must also remain free of structures. There are other restrictions on what uses are allowed in the ATZ, depending upon the type of funding used for acquisition.

Federal grant noise money can be used to purchase ATZ properties if they are noise sensitive and if they are within the 65 or greater DNL contours. Once purchased, the residential structures must be removed and the property can be sold or leased for compatible development. The money received from the sale or lease must be used for other noise projects that have been approved by the FAA. The money does not necessarily have to be returned to the FAA but must be used for noise projects within a reasonable time. The money cannot be used for the airport's match of Federal funds.

Federal grant Development funds (entitlements) can also be used to purchase ATZ property. However, in this case the property must be cleared of all structures and nothing can be rebuilt. Chances of getting development funds for such purposes are very slim, due to national priorities for such funds. Paul reiterated that there is a five million dollar per year cap for each airport for noise money. PFC monies can be used to purchase the property. Non-compatible uses removed and then sold or leased for compatible development. Again, the money must then be used for PFC projects.

If only Port funds are used, the FAA has no power to restrict how those funds are used in the acquisition of ATZ properties.

Paul stated that the RPZ is more restrictive than the ATZ, as far as redevelopment uses and FAA requirements are concerned. FAA strongly discourages roads/highways from being developed in an RPZ, and would also discourage the expansion of such uses. Such uses are discouraged but not prohibited by statute.

Rose Clark asked if the Port owned all the existing RPZ's and Ron Seymour said yes. The southern RPZ for the third runway is under negotiation with the FAA concerning the need to acquire the entire RPZ.

It was then asked what was required on the sides of the runways. Paul Johnson answered that the Object Free Area runs parallel to the runway for the entire length of the runway and connects the two RPZs at each runway end. In addition there are FAR Part 77 requirements that control the heights of structures or other objects not only off the sides of the runways but also on the approaches. The committee members asked to be sent the Part 77 Drawings for the airport. Ron Seymour replied they would send them. FAA also stated that they would bring a three dimensional model to the next subcommittee meeting.

A question was asked concerning what is "Port" money. Answer, anything other than AIP grants or PFC funds.

Paul Johnson then completed his presentation and turned the meeting over to Ryk Dunkelberg to present the Land Use Outline.

Ryk Dunkelberg began the discussion by stating that the recommendations contained in the Outline were the Consultants recommendations and had not been indorsed by Port staff at this time. He also stated that the recommendations were based on input gathered at the last meeting, which generally stated that people residing within the loudest noise contours should be addressed first and that there should be no distinction between single family residents, multi-family residents or mobile home residents. All residential structures should be addressed. He then reminded the subcommittee that three noise contours have been produced; an existing 1998 contour, a 2004 contour and a 2010 contour. The 2010 contour was generated with the third runway in operation. The existing 1998 noise contour was the largest, and he recommended using that contour as the basis for our land use recommendations. He cautioned that with a caveat stating that the operations subcommittee was looking at flight tracks recommendations that may actually result in a change to the 65 DNL contour. If that is the case, then the program defining noise contour will have to be revisited. Guy Spenser asked if we were sure the existing contour was larger than the 2010 with the third runway contour. Ryk answered that it was. Craig Ward asked if the airport had the option to determine which contour, the existing or five-year contour that would like to use, and Ryk answered that they did have that option. There was general agreement with the subcommittee that the existing contour should be used for defining the land use programs, as it is the biggest contour.

Ryk then discussed the recommendation to expand the Noise Remedy Boundaries. This would entail expansion to the south, north and west of certain portions of the Boundary to be consistent with the 1998 65 DNL noise contour. The Recommendation continued to sound attenuate those residential structures within the expanded Noise Remedy Boundary based on the same criteria and guidelines as those residential units within the existing Noise Remedy Boundary. There was general agreement among the subcommittee that the boundaries be expanded. The estimated cost for this is approximately 32.4 million dollars.

Ryk then discussed the multi-family recommendation. Ryk stated that the recommendation is to sound attenuate owner-occupied multi-family structures within the 70 DNL noise contours first. Once owner-occupied multi-family structures were sound attenuated, then renter occupied multi-family structures would be given second priority. There was considerable amount of discussion concerning the difference

between owner and renter occupied multi-family structures. Ryk reported on the findings of a survey conducted by the Consultants subsequent to the last meeting concerning airports that sound attenuated multi-family structures. Of those airports that sound attenuate such structures, the majority do not address rental units. Of those airports that do address rental units, most address owner-occupied first and then rental units. Some airports address them both on an equal basis. There was continued discussion concerning if there should be a distinction between rental and owner occupied multi-family units and it was generally agreed upon by the subcommittee that both rental and owner occupied structures be treated the same and that the only differentiation should be made by noise level, with those units within the highest noise levels be given priority. It was suggested that these be identified by individual DNL noise level contour. The estimated cost for owner-occupied attenuation is approximately 6.6 million dollars and for renter occupied units is approximately 26.4 million, for a total program cost of approximately 33 million dollars.

Ryk then presented the recommendation concerning mobile homes and mobile home parks. The initial recommendation is for the Port to purchase the mobile home parks within the 70 DNL noise contour from the owners and relocate the mobile home owners, with no distinction between rental units and owned units. The second part of the recommendation is based on Port Resolution 3257, which expands on the existing Part 150 recommendation to provide funds up to \$12,000 to help relocate individual mobile homes within the 65 DNL noise contour. The existing program provides up to \$6,000. There are a number of criteria in the existing program which are expanded upon in the Port Resolution which must be met prior to the money becoming available. There was general agreement among the subcommittee concerning this recommendation. The estimated cost for this is approximately 53.9 million dollars, for addressing mobile homes both within the 70 DNL and the 65 DNL contours.

Ryk then stated that the cost of the recommendations, as he has presented them, was estimated to be approximately 120 million dollars. This did not include addressing schools, which were being considered outside the Part 150 process, but which must be included in the overall noise mitigation budget.

There a few final suggestions for clarification of the recommendations. Rob Odle suggested that a concern that his community, as well as others, may have concerning the ATZ is that there be some guarantee that when residential structures are appraised, they are appraised at residential value and not a perceived value. This could be a concern if the community is required to rezone the property for a compatible use prior to the purchase of the residential units. This was discussed and it was suggested that a Memorandum of Agreement might be the appropriate way to address these types of issues. The FAA also stated that the Federal process must be

followed and it ensured that the homeowner was given the highest consideration for the value of the residential property.

Guy Spencer also suggested that the subcommittee recommend to the Port that all money be spent on noise mitigation programs before it is used for other expansion or capital improvement projects. It was suggested that this recommendation be made as part of the priority setting process which the subcommittee would address at a later date. Guy suggested that it would be a good idea to get the suggestion on the table at this time.

There were no comments or suggestions from the audience, and the meeting was adjourned at 8:10 pm.

**Sea-Tac Part 150 Study  
Land Use Subcommittee Meeting  
February 10, 2000  
Minutes**

**Attendees:** Stephen Kiehl, Joanne Schaut, Guy Spencer, Craig Ward, Rose Clark, Rob Odle, Jim Combs, Loyce Saar, Duane Anderson, Richard Kennedy, Paul Johnson, Lynae Jacobson, Ron Seymour, Robert Kikillus, Bob Wells, Stan Shepherd, Stephanie Shadle, Ryk Dunkelberg, Mary Vigilante and a few guests.

**Handouts:** Agenda, Land Use Outline, Summarized Recommendations

Ryk Dunkelberg opened the meeting and thanked everyone for coming. He explained that this meeting was intended to discuss the remainder of the Land Use Recommendations, with the exception of the ATZ issue. He stated that the members should be thinking about priorities between now and the next meeting because that would be the focus of the next meeting. He then summarized the Recommendations to date:

- The largest contour (1998 Existing Base Case) will be used for land use planning recommendations and program boundaries. This means that properties located within this noise exposure contour will serve as the means of recommendations for land use actions, such as insulation.
- That Residential uses within the Approach Transition Zone (ATZ) be purchased if a number of associated actions are completed. The communities of Burien and SeaTac work in conjunction with the Port to prepare redevelopment plans for the areas consistent with both community and Port goals, and that an Intergovernmental Agreement be developed between the Port and the communities spelling out issues of concern.
- That the Noise Remedy Boundaries be expanded to include the 65 DNL of the 1998 Existing Base Case contour.

- That Mobile Homes and Mobile Home Parks within the 70 DNL contour be purchased. The existing policy will be amended to increase the amount of relocation assistance for mobile homes within the 65 to 70 DNL noise contour to \$6,000 per home, up to a maximum of \$12,000.



- Insulate all multi-family structures within the 70 DNL noise contour. The Consultant suggested just the owner-occupied structures be insulated first but the Subcommittee determined that there should be no distinction between the two.

During the discussion of these recommendations, Loyce Saar asked to be provided with the address of all mobile home parks of concern. Ryk responded that he would provide them.

Subsequent to discussion of the previously discussed recommendations, Ryk Dunkelberg pointed out the various maps that had been sent pursuant to a request from subcommittee members. These maps were large-scale maps with street names and identified mobile home parks, public facilities and the existing noise remedy boundary. There were separate maps presented for areas north and south of the Airport.

Discussion followed on what was included in the Public Facilities category and if there was a better name. It was determined that the map would be titled Non-Residential Noise Sensitive Uses with a legend identifying each type of facility and that only those facilities within the 65 DNL would be shown. It was noted that the facilities that fall within this category are required by the FAA to be noted on the official noise exposure maps. It was pointed out that several schools were not on the map. Ryk Dunkelberg said he would check because they were in the database and it appeared that the portion of the data based noting schools had inadvertently not been plotted.

Discussion followed on the Noise Remedy Boundary map and it was determined that the map should be labeled "Existing Noise Remedy Boundary Map". Craig Ward asked if all properties within the new expanded boundaries would be eligible for attenuation. Ryk Dunkelberg answered that they would to the same degree that homes within the existing boundaries are and the same criteria must be met.

Ryk Dunkelberg then presented information concerning public facilities and the following sample recommendations:

- The three health care facilities with permanent living space (Monarch Care Center, Harmony Gardens, and Wesley Home Care) within the 65 DNL be attenuated

- Churches within the 70 DNL be attenuated as a second priority
- The two fire stations (in Des Moines and SeaTac) and churches within the 65 DNL be attenuated as a third priority.

Discussion followed with general agreement on the sample recommendation.

However, there was additional discussion concerning the ATZ issues and why we were addressing them here (as it pertained to residential land use, including mobile homes) since the ATZ is defined by the third runway and this Part 150 does not address the third runway. Mary Vigilante addressed the issue by stating that the Master Plan Update EIS considered the noise sensitive land uses within the ATZ but did not receive sufficient public input or response during the EIS process to determine community or public input. Because the ATZ criteria is not based on noise, but has a clear relationship to annoyance, the Record of Decision suggested that the Part 150 Study should evaluate the priorities of noise and the acquisition of the ATZ properties. Paul Johnson stated that the ATZ is an area that is at the end of a Runway Protection Zone (RPZ), twice as long as the RPZ centered along the extended runway centerline and the width of the widest portion of the RPZ. FAA does not require airports to own the ATZ, but it is eligible for Federal participation.

Stephen Kiehl asked if we had addressed how proper planning would take place in the ATZ. Ryk answered that part of the ATZ recommendation included an Intergovernmental Agreement to further define how these properties would be redeveloped and that the role of the Part 150 was to set broad, conceptual guidelines about how the ATZ should be addressed and what criteria should be used if it is determined that residential uses will be purchased.

Ryk Dunkelberg then presented the recommendation concerning Comprehensive Plans; Burien and SeaTac amend their community plans to reflect the ATZ recommendations and that the communities enter into an Intergovernmental Agreement with the Port concerning development and conversion of these areas. It is also recommended that the plans reflect the noise remedy boundaries. Craig Ward asked what in particular had to be amended in the SeaTac plan. Ryk Dunkelberg answered that only if, through the redevelopment of the property and the Intergovernmental Agreement, some change from the existing plan was determined to be desirable, and then an amendment would be in order.

Discussion followed concerning the need for long range planning on the part of the Port so that communities could plan with assurance that things would not change. Guy Spencer commented that the Port should be required to provide a long-range plan for the Airport so that local communities could do planning to reflect the Airport. Ron Seymour pointed out that the Port's Master Plan reflected its long-range plan, for as far as the Port could reasonably forecast at the time of its preparation. Ryk Dunkelberg then pointed out that the Part 150 has prepared contours with the third runway and these have been presented. Craig Ward reminded the subcommittee that, even though he would like to see fifty year planning if possible, no city is required to do so and that it would be very difficult to plan that far in advance. Mary Vigilante reminded the subcommittee that one of the reasons for producing the 60 DNL noise contour was to help communities plan for the long range future, using that contour as a basis for flexibility in long range planning. Stephen Kiehl requested that we add language to the recommendation that the FAR Part 77 surfaces be addressed in the comprehensive planning recommendation.

Ryk Dunkelberg then presented the sample recommendation for zoning which was the same as the Comprehensive Plan recommendation. Craig Ward suggested changing the "zoning ordinance" to "zoning map" as that was what was really intended. Ryk agreed. The recommendation also stated that no zoning changes be granted that will allow additional mobile (manufactured) homes within the 65 DNL. Discussion followed on what was a manufactured home as compared to a modular home. It was pointed out that the HUD definition has been changed from mobile to manufactured home and that a modular home is a home on a foundation that is constructed in pieces, very similar to a stick built home. It was also pointed out that restricting the addition of mobile homes in an area allowing stick built houses was against state law.

Ryk Dunkelberg then presented the sample recommendation for Building Code Uniformity. The recommendation is that all communities follow the Des Moines, SeaTac and King County sound attenuation requirements. Richard Kennedy asked that we state more clearly that all communities agree on the same building materials for achieving sound attenuation. This would make it easier on contractors and may help reduce the cost of such materials through uniformity of codes. In addition, the recommendation states that any new schools, either public or private, be required to achieve sound attenuation

reduction to the same extent that the Port and the Highline School District have agreed upon.

This recommendation also contained language that those residential structures that would fall within the expanded Noise Remedy Boundary not be limited to those built prior to 1987 and the adoption of the associated building codes. Discussion followed on what this meant and why it was a criterion. Paul Johnson stated that the FAA would not fund noise remediation projects for homes constructed subsequent to 1987 within the Noise Remedy Boundary because at that time the noise contours had been published, the communities knew the location of the contours and the Noise Remedy Boundary and that sound attenuation requirements had been adopted. It was questioned whether this was fair to the subsequent home buyer and Paul said that it would be a poor expenditure of public funds to allow them to be spent when public officials should have ensured that homes were constructed with attenuation. It was asked if the Port could waive the policy and Paul answered that it was FAA policy and could not be waived.

Ryk Dunkelberg then passed out a list of the summarized recommendations and requested that the Subcommittee review them and be prepared to discuss overall land use priorities as the next meeting in March.

There was one comment from the audience asking the approximate time frame of when multi-family owners could anticipate sound attenuation. Ryk Dunkelberg stated that it would most likely be late 2001 or early 2002 due to review and approval by the FAA. The meeting was adjourned at 7:45 pm.

**Sea-Tac Part 150 Study  
Land Use Subcommittee Meeting  
March 8, 2000  
Minutes**

**Attendees:** Stephen Kiehl, Joanne Schaut, Craig Ward, Rose Clark, Rob Odle, Jim Combs, Richard Kennedy, Eric Tweit, Cayla Morgan, Lynae Jacobson, Ron Seymour, Rachel Garson, Bob Wells, Ryk Dunkelberg and Mary Vigilante.

**Handouts:** Agenda, Land Use Priorities, Large Maps, Summarized Revised Recommendations

R. Dunkelberg opened the meeting and thanked everyone for coming. He explained that this meeting was intended to discuss the priorities of the recommendations and to finalize the wording of the recommendations. He stated that the members should be thinking about funding between now and the next meeting because that would be the focus of the next meeting. He then asked for comments on the Revised Recommendations. R. Odle, R. Kennedy, J. Combs and J. Schaut suggested several wording changes, for clarification. The subcommittee agreed to these and R. Dunkelberg stated that he would make the changes and send the Revised Recommendations out for review.

R. Dunkelberg then entered into a discussion about priorities. He stated that the priority list and matrix that had been developed were the Consultant's interpretation of the Subcommittee's discussion to date, and that it was meant as a starting point for discussion. The Subcommittee then discussed several possibilities for prioritizing the recommendations. The basic premise that all agreed with was that the loudest contours be addressed first, with residential structures having the highest priority within the contours. R. Seymour reminded the Subcommittee that existing programs would be completed prior to starting new ones. This is particularly true with the on-going noise insulation program within the existing boundary. The Subcommittee wanted to make sure that all eligible homeowners were notified and that they had an opportunity to participate.

After much discussion, the priorities were developed as presented below:

- **One.** Acquire mobile home parks and relocate mobile homes within the 70 DNL contour.
- **Two.** Sound attenuate multi-family structures within the 70 DNL contour.
- **Three.** Sound attenuate health care facilities and sleeping portions of fire stations within the 70 DNL contour.
- **Four.** Provide assistance for moving mobile homes within the 65 DNL contour.
- **Five.** Sound attenuate single-family residential structures within the expanded Noise Remedy Boundary.
- **Six.** Sound attenuate multi-family structures within the 65 DNL contour.
- **Seven.** Sound attenuate health care facilities and sleeping portions of fire stations within the 65 DNL contour.
- **Eight.** Sound attenuate all places of worship and libraries within the 65 DNL and greater contours.

R. Dunkelberg reminded the subcommittee that all sound attenuation recommendations would be subject to the same minimum criteria and guidelines that the existing programs are conducted under.

Subsequent to the development of these priorities, the Subcommittee discussed and agreed upon the following:

- Once a measure is committed for budgetary purposes, the next priority measure should be initiated without waiting for full implementation of the higher priority measure. This is especially true when considering the acquisition of mobile home parks and the relocation of mobile home units, due to the extended time required to fully implement that measure.
- Subsequent to the completion of priority Three, Sound Attenuation of Health Care Facilities and Fire Stations, the DNL noise contours should be re-examined to determine the number and type of facilities within the 65 DNL contour.

There was a short discussion concerning funding issues and R. Kennedy made the point that we should not be tied to only considering Federal funds,

that the Port had other funds available that we need to consider. J. Combs agreed and made the point that all of the communities should also accept some responsibility and help pay for the programs. R. Kennedy stated that the close-in communities have already paid their share indirectly through lower tax base revenues due to lower property values. R. Clark agreed with R. Kennedy and gave example of lower property taxes in Burien. J. Combs stated that he agreed with them and indicated that he meant that all the communities within the region help pay for the programs because they all benefit from the Airport. S. Kiehl agreed that it was a regional issue and would like to find a regional solution. R. Seymour stated that the purpose of the next meeting of this Subcommittee was to examine the differing money sources available to fund programs.

R. Dunkelberg ended the meeting stating that the next meeting would be in April, and the issues for discussion would include program funding. The meeting was adjourned at 7:45 pm.

**Sea-Tac Part 150 Study  
Land Use Subcommittee Meeting  
April 13, 2000  
Minutes**

**Attendees:** Stephen Kiehl, Joanne Schaut, Rose Clark, Jim Combs, Guy Spencer, Eric Tweit, Glynis Casey (for Craig Ward), Ron Seymour, Clare Impett, Charles Blood, Jazzie Richardson, Bob Wells, Ryk Dunkelberg and Mary Vigilante.

**Handouts:** Agenda, Funding Paper, Land Use Priorities, Summarized Revised Recommendations

R. Dunkelberg opened the meeting and thanked everyone for coming. He explained that this meeting was intended to discuss the Funding Working Paper and finalize the recommendations of the subcommittee and the funding priority of those recommendations. He then turned the meeting over to M. Vigilante to discuss the Funding Working Paper.

M. Vigilante explained that the paper was just completed that morning because of last minute information obtained from the Port concerning funding information. She then explained that the Paper presented the three major sources of funds that could be used for noise mitigation/abatement; Airport Related Funding Sources, Port of Seattle Funding Sources, and Local, State and Other Federal Sources.

Airport Related Funding included Airline Rents and Charges, Airport Improvement Program (AIP), Passenger Facility Charges (PFC), Bond Funds and Other Funds. M. Vigilante stated that Airline Rents and Charges produced \$79 million, with a remaining \$95 million from non-airline sources. Airline charges are guided by the Basic Airline Lease Agreement and this agreement currently expires in 2001 and is being renegotiated by the Port. All revenue generated subject to the agreement must be used to offset the cost of the operation and maintenance of airport facilities. Noise abatement activities are not funded by airline rents and charges, based on the terms of the Agreement. The Agreement also created the Airport Development Fund



(ADF) that does not require airline approval. All of these monies are committed to implement the Master Plan projects through 2010.

M. Vigilante then described the Airport Improvement Program (AIP), which is derived from a tax on fuel and ticket prices. The AIP is authorized by Congress up to 2003 but only appropriated for 2000. There is new legislation, which increases the size of the trust fund through 2003. These funds are categorized as either entitlements or discretionary. Entitlement funds are monies granted to an airport based on the number of passengers each airport accommodates in any year. Discretionary funds are monies available for use at the discretion of the FAA administrator, and represented 33 percent of the trust. Approximately 34% of discretionary funds are allocated for noise projects. This results in approximately 11% of the total AIP program. M. Vigilante explained three figures that showed the allocation of such funds on a national basis and as allocated by the Port. In 1999, the Port received \$27 million in AIP funds, \$4 from entitlements and \$23 from discretionary. About \$5 million of this was used for noise projects. The FAA has put a cap of approximately \$5 million annually for noise funds to any airport.

After some discussion, M. Vigilante then presented Passenger Facility Charges information. Congress has allowed airports to charge a fee to passengers at their airports up to \$3.00 per passenger. The Port anticipates approximately \$75 million in PFC money over the next ten years to be used for noise abatement projects. However, just this month Congress increased the PFC charge to \$4.50 per passenger. The \$75 million is based on the \$3.00 amount. PFC revenues can also be used to back bonds issued by the Airport.

Bond Funds were then discussed. M. Vigilante stated that General Airport Revenue Bonds are issued by the Port, backed by Port revenue, and fund capital improvement projects at Sea-Tac. A total of \$20 million in revenue bonds have been used to implement noise projects.

Other Funds, such as third party funding is not likely for noise as no revenue stream is usually available, although such funding could be used for transitional land use projects where development is anticipated.

At this point there was a lot of discussion concerning revenue diversion and what it meant. Generally, it means that revenue derived on the airport or under Federal approvals, must be used for on-airport projects. M. Vigilante

gave the example that in sound attenuation projects in St. Louis, if a house was not up to code, the airport could not expend funds to bring it up to code. Many communities require homes to be up to code before they can be sound attenuated. Generally, the action taken must remedy a problem eligible for Federal funding.

Mary then presented Port of Seattle Funding Sources. She stated that the Port is authorized under Washington Statutes to levy a tax, with two limitations; one, the total tax levy may not exceed \$00.45 per thousand dollars of assessed value and two, annual increased in the amount of the levy are restricted to the lesser of inflation or 6%. The tax levy may not be used for debt service. By policy, the Port uses the levy solely for Marine-related capital expenditures and community investments. Since 1992 the tax levy has been \$35.6 million per year. This is based on \$00.24 per \$1000 of assessed value.

General Obligation Bonds or Revenue Bonds were then discussed. The Port may issue either, however, the total amount of the Port' GO Bonds outstanding is restricted by statutory limitation based on the total assessed value of property in King County. Industrial Development District Levy funding was briefly discussed but is not really applicable for noise projects.

Jim Combs asked if Initiative 695 would impact the ability of the Port to increase the tax levy. Both Charles Blood and Steve Kiehl indicated that the interpretation was that a vote would be required.

Mary then briefly discussed a myriad of local, state and other funding sources. She stated that there are some programs, but most are lacking any funding. This was especially true for any state or local programs based on I-695.

Guy asked what the source of the prohibition to the use of tax levy being used for debt service. Mary and Bob Wells both stated they were not sure but would try to find out.

Jim Combs asked if this is appropriate to say in Section Tree that local and state organizations could grant funds that would not be subject to Federal regulations. Mary stated that she will call to find out and explain in a revised copy.

Guy stated that it would be helpful if a table were developed that showed potential amount of money available from each source. Jim Combs agreed that it would be helpful to build a table that show funds by category. Steve Kiehl suggested that we put total costs and revenues in the priorities table. It was also suggested that the priorities and the timelines be two separate pages.

Guy suggested that we show in the priorities and recommendations that the Subcommittee wanted to put sound attenuation of schools as a first priority, even though they were an on-going separate dialog between the Port and the Highline school district. The Subcommittee as a whole agreed and Ryk would make that addition to the priorities matrix and the recommendations.

Rose asked why the Port was purchasing homes in the ATZ and not using physical boundaries when we had all agreed that such boundaries would be used. Both Mary and Ron answered that it was not purchases within the ATZ but in the RPZ (runway protection zone) for the new runway. Rose stated that by leaving some parcels of residential property, those remaining were being subject to crime and other undesirable situations.

It was then pointed out that the Recommendations had the priorities for fire stations and religious facilities backwards, although it was correct in the priorities matrix. Ryk indicated that he would correct.

The meeting was adjourned at 7:45 pm.

# Sea-Tac Part 150 Study Update

## Operations Sub-Committee

October 21, 1998

6 PM - Aviation Auditorium

### Meeting Minutes

**Attendees:** Dick Haferbecker, Alaska Airlines, Bob Rudolph, KC District 6, Richard Kennedy, Des Moines, Steve Mullet, Tukwila, Mike Anderson, KC District 8, Jules Bloomenthal, KC District 10, Jim Combs, Seattle, Paul Johnson, FAA, Ron Seymour and Bob Wells, POS, Bob Barnard and Ryk Dunkelberg, BDA, Paul Dunholter, BridgeNet, Mary Vigilante, Synergy, Claire Barrett, CBA.

**Handouts:** FAA FAR Part 150 Required Alternative for Evaluation, B150.7 (b)

PSRC Requirements for Evaluation, Resolution A-96 02

Evaluation Measures Identified by the Public

Categorization of Part 150 Actions (a matrix of the above three issue lists)

Dunkelberg opened the meeting asking everyone to introduce themselves and describing the purpose of the sub-committee and the agenda for the first meeting. The committee's purpose is to develop possible noise abatement programs dealing with the operation of aircraft. The agenda for the evening is to define what these areas are, and, as specifically as possible, what the actual noise problem is. Then the job will be to prioritize these issues so that analytical work can begin.

. Barrett referred to four items written on a pad which constituted the evening's agenda. They were:

- o Definition of Sub-Committee purpose
- o Relationship to Data Sub-Committee
- o Specific study items to be analyzed
- o Prioritizing these items.

A brief description followed covering the study's requirements as defined by FAA in its Part 150 regulation, by PSRC in its Resolution, and by public comments received so far during this study. The handouts describing each of these items and their inter-relationship were described. Definitions of each possible program were given, and members of the committee voiced their views about the relative importance of each. Several examples of the type of analysis appropriate for each item were given. Particular attention was given to analysis which could be conducted

prior to the four season noise monitoring program's completion and the availability of final noise contours.

J. Bloomenthal voiced some frustration over the length of time between meetings. The consultant team offered an explanation of the regulatory requirements necessary in order to receive a part 150 approval from the FAA. These include clearly defining the problem, evaluating possible mitigation measures and quantifying the probable benefits of the study's recommendations to the extent possible.

Another key factor in the length of time needed for this study is the Port's agreement at the community's request, to conduct a full year's noise monitoring in the field. Since the last round of monitoring will take place in January, 1999, a final contour will not be available until March, 1999. A question was posed to the committee: if two rounds of monitoring, which is considerably more than most Part 150 studies conduct, is considered sufficient, then the data analysis could be conducted sooner. There was no clear reaction to this question by the committee as a whole although some members spoke in favor of the full monitoring program.

The remainder of the meeting was taken up with discussion of the possible program items individually.

#### **Program items:**

**Preferential Runways** were defined as the recommended use of one or more runway configurations during discretionary periods; that is when wind, weather and other operating conditions allow the FAA Control Tower to choose between runway options. M. Anderson said that he felt this was a low priority item, since there were people living off the ends of all runways, and there is no obvious low impact choice. J. Combs took the view that a fair distribution of flights might be a preferential runway goal. B. Rudolph was interested in increasing the use of Elliot Bay late at night during low traffic conditions. That flight path, however, can coincide with Boeing Field's pattern, so proper separation must be maintained. The committee consensus was that more information was required before assigning a priority to this issue.

*Analysis: Determine the percentage of time the Tower has discretion over runway use, what are current policies on runway use, and what kind of choices are available.*

**Arrival Profiles** were considered important by J. Bloomenthal who believes that there should be a steeper descent profile for flights arriving over Capitol Hill. There was some discussion about deviating from the standard three degree glide slope. The consulting team stated that this would be very difficult to achieve.

**Flight Tracks** were divided into two categories: adherence to existing tracks and consideration of changing tracks.

Adherence to flight tracks is an issue that can be evaluated prior to completion of noise monitoring, as a great deal of data has already been collected. Questions were raised about the effect of FMS (Flight Management Systems) on flight track adherence, and it became clear that much needs to be learned on that topic.

*Analysis: Define deviation from the "ideal" flight track. Determine how many aircraft are equipped with FMS; how often are those procedures used, and if used, do they achieve better flight track compliance? An effort to answer these questions will be made.*

**Overlap between Sea-Tac and KCIA** was raised as an important issue by S. Mullet who feels that certain areas of Tukwila do not appear in either airport's contours, but probably would if both airports' noise was considered together. He also requested a monitoring site in Tukwila during the November noise monitoring cycle.

*Analysis: Determine how technically to define these areas of overlap and what the combined noise levels are.*

**Run Ups**, the testing of engines after maintenance, were described as an important noise issue both during the day and night. Discussion centered around the question as to whether much of the noise people describe as run ups is actually that, or a combination of take off roll, reverse thrust, auxiliary power units (apu), and run ups.

*Analysis: Determine the number and time of day of run ups at the airport. Consider their current locations and whether they could be improved, as well as whether the orientation of the aircraft (which way the engines are pointed) could improve. For the longer term, consider the use of a hush house including the questions - for which aircraft types and where it would be located.*

**Ground Noise** is the close in airport noise caused by a combination of run ups, take off roll, reverse thrust, apus, and taxiing. This noise will be measured by the microphones close to the airport.

*Analysis will be conducted on this four season data when it is available.*

**Departure Profiles** were defined as the method by which pilots apply power and when they cut back. FAA recognizes two departure profile methods. The first method is known as the far-out procedure. In this procedure, the pilot maintains a higher power setting while retracting some of the flaps beginning at an altitude of approximately 1,200 feet. This procedure allows the aircraft to gain altitude more rapidly but creates more noise close in to the airport. The far-out procedure is the standard departure procedure across the country and what is currently being used at Sea-Tac.

The second procedure is known as the close-in procedure. In this procedure the pilot pulls back on the power once reaching an altitude of approximately 1,200 feet while leaving the flaps extended. This method reduces the rate of climb but creates less noise close in to the airport while increasing noise further away from the airport. The close-in method is what is used at John Wayne Airport in Orange County, California.

*Analysis: To test the noise impact of these two alternative, it might be possible to ask an airline to test the closer in procedure during one of the upcoming noise monitoring cycles. Or, it may be possible to procure good data from another site where comparison testing has been conducted.*

**Fly Quiet** programs were described as pilot techniques which may improve the noise level of aircraft. These may include such items as flap settings, timing of lowering the landing gear and other similar operational techniques.

*Analysis: Look at the noise data collected so far to see if patterns develop such as significantly differing noise levels between similar aircraft flown by different airlines. Factors such as stage length; that is how far the aircraft is flying and how much fuel and cargo it carries must be accounted for in this analysis.*

**Non Jet Flight Tracks** as well as varying altitudes of these mostly commuter aircraft were described as a problem.

*Analysis: Look for patterns in available flight track and altitude data.*

**Intersection Take Offs** are departures which do not require the entire length of available runway and which can begin at an appropriate intersection between the taxiway and the runway. These can reduce the amount of taxiing necessary, and may allow the beginning of take off roll to be a greater distance from residences.

*Analysis: Investigate the FAA Tower's policy on intersection takeoffs at Sea-Tac.*

After some discussion, the Committee agreed that the priority issues to be evaluated for the next meeting are:

- o Run ups
- o Adherence to flight tracks
- o and some information on Fly Quiet programs.

The third meeting will consider the issue of Approach Profiles.

The next meeting is scheduled for December 10, 1998 and the third meeting will be scheduled in February, 1999. There will be a TAC/CAC meeting on November 18, and an Open House on November 19, 1998.

The meeting adjourned at 8:10 PM.

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**Sea-Tac Part 150 Study Update  
Operations Sub-Committee Meeting  
December 10, 1998  
Minutes**

*Attendees:* Rose Clark, Cynthia Stewart, Bob Rudolph, Richard Kennedy, Jules Bloomenthal, Steve Mullet, Mike Anderson, Jim Combs, Dan Boyle, Ron Fincher, Scott Ridge, Lloyd Doctor, Guy Spencer, Bob Wells, Bob Hennessey, Ron Seymour, Lynae Jacobson, Rob Kikillus, Paul Dunholter, Mary Vigilante, Claire Barrett

*Handouts:* Agenda, List of Sub-Committee Members, Part 150 Meeting Schedule, Review of Airport/Aircraft Operational Noise Abatement Actions, and Noise Abatement Procedures Program.

**I. Committee Procedures:**

Ron Seymour began the meeting with a discussion about future committee procedures. In particular he asked whether the committee would like to have a facilitator to manage the agenda, keep items on time and keep the discussion flowing productively. And, if so, would the committee prefer to have a citizen member, a Port of Seattle staff member or a member of the consulting team in that role.

Steve Mullet, Jules Bloomenthal and Bob Rudolph all spoke in favor of a facilitator and suggested that a member of the consulting team perform this function. There seemed to be committee consensus on this point, and Claire Barrett agreed to be the facilitator for this meeting.

Next Ron Seymour asked about setting specific ground rules for the committee and Claire Barrett asked whether meetings should open with time for the committee members to raise questions, or whether discussion would best be intermingled with consultant presentation of material.

Guy Spencer felt that the ground rules contained in the Public Involvement Plan were sufficient for the committee. Lloyd Doctor wanted to concentrate more on results than process, and Cynthia Stewart commented that each meeting should have a desired outcome, with the format designed to reach that goal. Jules Bloomenthal wished to have realistic agendas. Generally the committee felt that discussion should coincide with presentations and not precede them.



### **Summary of Consensus Items:**

1. The consultant team will provide a facilitator for meetings
2. Discussions will be interactive with committee members participating as material is presented.

### **II. Information Format:**

Mary Vigilante introduced a new format being suggested for each operations item to be considered under Part 150. The format contained in the handout is to be treated as a work in progress with different sections filled in as the work proceeds. The last item under each study item is a list of preliminary recommendations. Paul Dunholter asked if the committee members wanted the consultants to present initial recommendations for discussion, or develop these during committee meetings.

Committee members agreed that they would like to work off of consultant suggestions. These will be discussed by the committee, analyzed further as necessary, and finally prepared as Part 150 recommendations to be presented to the Port of Seattle Commission for their review.

Cynthia Stewart commented that she thought the format was good. Guy Spencer commented that he would like materials in committee hands a week before each meeting. Lloyd Doctor wants committee positions on recommendations to be clear, and the Port's response to be clear also.

Jim Combs asked whether the matrix of operational issues contained within the document would be prepared for the other two sub-committees also. Mary Vigilante said this would be possible for Land Use perhaps, but would not really suit the nature of the Data committee agenda. Richard Kennedy suggested adding a column to the operations items matrix indicating which agency has jurisdiction over each issue.

Several committee members voiced support for treating the issue of new or altered flight tracks as a high priority. The distinction was made between "adherence to flight tracks", an item on this agenda, and new flight tracks which can be studied under Part 150, but not implemented without a separate environmental process conducted by FAA.

Lloyd Doctor wished to dispute the designation "noise abatement" flight tracks saying that current procedures do not serve that purpose. Steve Mullet wished to distinguish between compliance with existing procedures and the value of those procedures for noise abatement. Jim Combs commented that he would like to understand whether any suggested procedure is operationally viable before considering it further.

### **Summary of Consensus Items:**

1. The proposed format is accepted and will be used as a working document.
2. Consultants will present initial recommendations with the draft material.
3. The matrix will have an additional column added defining the agency responsible for implementation of each item.
4. Materials will be provided to the committee a week prior to the meetings.

### **III. Run-ups:**

Paul Dunholter proceeded to present the findings on run-ups, which are contained in the handout. Most run-ups are in narrow body aircraft during the daytime and in the early hours of the morning. Complaints about run-ups are fairly consistent with their occurrence and are concentrated in the early morning and later evening.

Rose Clark suggested inviting someone from King County to come to the committee and describe their noise ordinance and how it applies to run-ups. Jules Bloomenthal asked about the frequency and nature of run-up violations. Ron Seymour replied that run-up violations are mostly related to inappropriate locations such as at hangars or gates. A suggestion was made that perhaps the run-up regulation could be amended to apply the nighttime restriction longer on the weekends making run-ups somewhat later in the morning.

Paul Dunholter continued the presentation by discussing the acoustics of run-ups. Showing contours for run-ups in various aircraft types, he explained that high frequency noise dissipates with distance leaving the low frequency rumble at close-in neighborhoods. More noise is projected to the rear of the aircraft than the front during run-ups, and as in flight, stage 2 aircraft are noisier during run-ups than stage 3 aircraft. For safety reasons, run-ups are conducted in the same direction as runways, so the jet blast is not directed at aircraft taxiing or operating on a parallel runway.

Placing an overlay run-up contour over a map of the airport vicinity, Paul Dunholter demonstrated why the existing primary and secondary run-up locations, with the aircraft nose facing into the wind, allow the maximum distance between the noise source (the engine) and the residential communities.

Guy Spencer asked about the height necessary for a wall to deflect run-up noise, and Steve Mullet wanted to know about their effectiveness. Lloyd Doctor was interested in the cost and effectiveness of the Chicago hush house. Paul Dunholter replied that a wall would need to be between 75 and 100' long and about 20 – 40' high. Walls are primarily used for deflecting jet blast rather than noise. The hush house in Chicago is effective, though some in Europe are less so due to improper aerodynamic design. The cost is about \$2.5 million.

### **Run-up Recommendations:**

In discussion of the sample recommendations presented in the paper the committee wished to add:

- Investigate restricting run-ups in the noisiest types of aircraft
- Investigate extending nighttime restricted period until later on weekend mornings
- Consideration of the economic benefit of providing a hush house allowing airlines to conduct run-ups at any time.

### **IV. Adherence to Exiting Flight Tracks:**

Committee members asked several questions about existing departure procedures including the proper nomenclature for each, the distinction between Elliott Bay/Duwamish corridor and Puget Sound procedures, and the history of these corridors. Ron Seymour explained that there is an initial departure corridor for day and night departures. During the nighttime hours this initial departure corridor is followed by the Elliott Bay/Duwamish corridor and then either Puget Sound northbound or southbound turns. Mike Anderson wanted to know why these nighttime procedures can not be used during the day. Dan Boyle replied that there are too many aircraft, and these procedures reduce airspace capacity.

Paul Dunholter then showed the difference in the spread of aircraft between those using FMS (Flight Management System) and those using more tradition navigational aids. The FMS tracks were grouped much closer to the corridor centerline. Other findings about adherence to flight tracks are contained in the handout. Dan Boyle pointed out that Sea-Tac is one of the earliest airports to use FMS and to develop procedures for it.

Jules Bloomenthal asked about the spread of aircraft. Dan Boyle explained that different aircraft types reach the necessary altitude at different locations causing the turns to be spread out. Historically the older aircraft types took longer to reach altitude. As for the spread in aircraft using FMS, we know which aircraft are equipped with it, but can't be certain that they are all using the equipment. Lloyd Doctor wanted to know if the FAA had established a mandatory schedule for installation of FMS. Dan Boyle replied that he did not know of one.

Jules Bloomenthal wanted to know if FMS also applied to arrivals. Paul Dunholter replied that it could but the effect would be far less evident, as aircraft are already very close to the runway centerline using the ILS.

### **Adherence to Flight Track Recommendations**

In addition to the Sample Recommendations listed in the handout, the committee wished to add:

- Investigate providing incentives for airlines to install FMS
- Investigate providing incentives for fly quiet programs and/or disincentives for noisier operations.

Richard Kennedy wished to remind the committee that although mandatory programs may require a Part 161 process, voluntary agreements were potentially easier to achieve.

**V. Next Meeting Topics:**

1. Departure and Arrival Profile Options.
2. History of Flight Tracks Prior to Four Post

**VI. Summary of Information Requests:**

1. Provide a list of consultants' e-mail and regular addresses, phone and fax numbers
2. Check whether April 7 is during Spring Break

**Sea-Tac Part 150 Update  
Operations Sub-Committee Meeting Minutes  
February 10, 1999 - 6PM**

**Attendees:**

Suzanne Alexander (ATCT), Mike Anderson (KC #8, Jules Bloomenthal (KC #10), Rose Clark (Burien), Jim Combs (Seattle), Lloyd Docter (Federal Way), Dick Haferbecker (Alaska Airlines), Clare Impett (King County International Airport), Cayla Morgan (FAA), Scott Ridge (Alaska Airlines), Bob Rudolph (KC #6), Cynthia Stewart (King County International Airport). Other Citizens: Carol Heltzel, Maxine and Ted Misselwitz; Port of Seattle: Jeff Fitch, Robert Kikillus, Ron Seymour, Stan Shepard, Bob Wells; Consultants: Claire Barrett, Paul Dunholter, Mary Vigilante.

**Handouts:**

Agenda, Insert Section IV.1 Change in Departure Climb Profile and IV.2 Change in Approach Descent Profile, and Set of historic flight tracks from 1985, 87,88, 89, and 90.

**I Introduction and Meeting Purpose:**

R. Seymour, Port of Seattle, began the meeting by welcoming the committee and discussing the agenda for the evening. He described the meeting's purpose:

- o A review of the format and information distributed in the mailing,
- o An initial recommendation on the issue of arrival procedures,
- o A description of the field test and analysis recommended for the issue of departure procedures,
- o A brief history of flight tracks prior to the four post plan.

**II. Discussion of Document (*Review of Airport/Aircraft Operational Noise Abatement Actions, February 2, 1999*) mailed to members prior to the meeting.**

M. Vigilante, Synergy Consultants, described the document as a work in progress, which would be regularly updated as new data and analysis become available. The purpose of the document is to allow study participants to see all the actions possible under a Part 150 study at once and to compare the recommendations as they develop.

C. Barrett, CB&A, solicited comments on the format. J. Combs asked that the versions be dated, and M. Vigilante agreed to create a format, so members would know which was the most recent version. J. Bloomenthal wished to know where the issue of flight tracks appeared and was advised that they are in Section III. M. Anderson wanted to know where the third runway fit and was advised that it would be treated under the category of preferential runway use in Section III also.

### III. Arrival Procedures

P. Dunholter, Bridgenet Consulting, described the data and analysis contained in revised *Section IV.2, Change in Approach Descent Procedure*. C. Barrett asked people to look at the proposed recommendations for this section and to consider these as Paul presents the information, so that they can respond to and/or amend the recommendations as desired.

Dunholter pointed out that noise is louder in south flow, because the weather is generally worse, and lower cloud cover intensifies noise levels. Indicating the spread of radar flight tracks in the handout, Dunholter pointed to the number of flights arriving below the three degree approach angle of descent provided by the glide slope.

This finding prompted much discussion about the reasons for a variation in aircraft altitudes on approach. One factor is whether the aircraft is on visual or instrument approach. L. Doctor pointed out that aircraft are more spread out on visual approach and may intersect the glide slope at different places and altitudes. Even on IFR approaches, however, some aircraft appear to intersect the glide slope later than others, or below 3,000'.

One recommendation for the study may be to work with the FAA Tower and the airlines to encourage pilots to intersect the glide slope sooner assuring that they remain at or above the 3 degree angle of descent. S. Alexander, who replaced Dan Boyle as FAA representative from the air traffic control tower at Sea-Tac, pointed out that any change, no matter how small it may appear, affects the entire system. Keeping some aircraft higher may affect the altitude or speed of other aircraft in the system.

P. Dunholter described the two proposed recommendations from this analysis. They are:

- Investigate a higher altitude intersect of the glide slope
- Create a fly quiet program to encourage aircraft to remain at three degrees or higher on approach.

A discussion about minimum descent altitudes and radar vectoring approaches followed with S. Alexander saying that someone from FAA flight standards should review any proposals. She pointed out that the FAA would not change minimum vectoring altitudes, because they are the definition of the lowest safe altitude an aircraft can fly into the airport. However, Alexander said that she would like to investigate why some aircraft are lower than the glide slope, and based on that information see what can be done to increase the altitude.

S. Ridge, Alaska Airlines, said that there is a difference between changing the angle of the glide slope descent to something higher than 3-degrees and changing the point where the glide slope is intercepted. He thought that any change in the 3-degree national standard was not feasible, but a change in the approach intercept point could be investigated. J. Bloomenthal said that such an approach would offer advantages outside the outer marker, that is in Capitol Hill and north.

A discussion about aircraft flaps on arrival followed. S. Ridge explained that the moment when flaps go down depends among other things on weather. In bad weather, pilots are likely to lower them earlier, so that they can concentrate fully on landing when they are closer to the airport. This contributes to higher noise levels in poor weather. ATC is another factor. If a pilot is asked to slow down, the flaps are partially lowered to reduce air speed. J. Fitch, Port of Seattle, pointed out that high speed taxiways offer a faster exit for aircraft from the runway. This reduces the need for ATC to slow in-coming aircraft.

This portion of the meeting was concluded with an agreement to look at the reasons why some aircraft arrive below the glide slope and to investigate what actions can be taken to keep them higher on arrival. The preliminary recommendations presented in the handout were agreed to.

### III. Departure Profiles

P. Dunholter explained the options for departure profiles as described in the handout Section IV.1. To evaluate the options available, Alaska Airlines agreed to test a close-in departure procedure where the departure thrust is cut back at 800'. At that point a reduced climb power setting is maintained until reaching the desired altitude. Alaska tested this procedure using MD-80 aircraft, while Dunholter recorded noise levels on the ground. The airport was in south flow during the test.

FAA sets standards for noise abatement departure procedures, which dictate that no power cutbacks can occur before 800' or after 1,500' in altitude. Airlines may design two procedures: one close-in and one distant, and airports may choose whichever procedure provides the optimum noise level for its particular circumstances.

Currently the departure procedure at Sea-Tac for Alaska Airlines involves a power cutback at 1,200'. Based on the noise levels from the current procedure and those gathered from the MD 80 test, a third option involving a cutback at 1,500' will may be modeled. Results will be compared, and the best option will be recommended.

S. Ridge explained that the existing procedure at Sea-Tac although called a distant procedure is actually a hybrid with a cutback at 1,200'. During the test of the 800' cutback procedure, Alaska waited as long as possible before retracting the flaps in order to keep the aircraft climbing instead of leveling off when the power is reduced.

J. Fitch asked about the effect of wind on the tests. R. Seymour answered that there were two attempts, but the first day was too windy for accurate readings, so the test was conducted on a calmer day. When doing the analysis, the test data will be compared to noise levels on a day with similar wind and weather conditions.

S. Anderson pointed out that there was some capacity impact on the airport due to the test. Aircraft were rising, but not moving away from the airport as fast as usual, so departures had to be slowed down somewhat. M. Vigilante asked if there was likely to be any impact on operations at Boeing Field. S. Anderson replied that there would not be during south flow, but possibly during north flow.

L. Docter suggested that the decision about which procedure was best from a noise point of view depended on the land use below the procedure. High ambient noise levels such as along I-5 could support higher power settings than residential areas. J. Bloomenthal requested that the test results be shown against a land use map indicating population density, if possible.

The point was also made that performance varies significantly between aircraft types. As a result, the airport may wish to apply certain departure procedures to certain slower climbing aircraft types such as MD-80s, but not to 757s, which climb very fast.

#### IV. Flight Tracks

R. Seymour compared the handout package of historical flight tracks, before the four post plan was adopted, to today's tracks. The differences are primarily to the east where arrivals come in over the University district, and in the south bound departures which now turn to the west at a later point. The major motivation for the four post plan was an increase in capacity. Previously ATC could only handle 40 operations an hour in south flow and 60 in north flow. FAA wanted to make south flow more efficient.

S. Anderson explained that the four posts are not at the corners where the air traffic turns. They are actually about 30 miles from the Airport, and the four post plan does not have much impact inside the airport area. C. Impett of KCIA identified the four posts as: Monroe, Whidbey, Olympia and Mt. Rainier.

L. Docter pointed out that although the four post plan itself may not have made many changes to flight tracks near the Airport, the FAA processed other changes at the same time which did impact areas close to the Airport. Since these items were in the same environmental document, people refer to them as four post. A discussion about the history of the north flow east turn ensued with C. Heltzel of Mercer Island and B. Rudolph of Medina. The discussion ended with the question as to whether fanning or concentration of flight tracks was more desirable.

The meeting ended with mention of the following meeting dates:

- Joint CAC/TAC – March 3, 1999 – 6PM
- Operations Committee – April 7, 1999 - 6PM - Topic will be flight tracks
- Open House – May 20, 1999.

CAC/TAC members will receive a letter with the revised schedule and a notice that material for the March 3, meeting will be somewhat delayed. Members should expect to have it a few days prior to the meeting.



# Sea-Tac Part 150 Study Update

## Operations Sub-Committee

April 7, 1999

### Meeting Minutes

#### Committee Member Attendees:

Suzanne Alexander, Mike Anderson, Jules Bloomenthal, Rose Clark, Jim Combs, Lloyd Docter, Dick Haferbecker, Betty Ivie, Richard Kennedy, Cayla Morgan, Steve Mullet, Bob Rudolph, Billy Self, Guy Spencer, Cynthia Stewart

#### Citizen Attendees:

John Barber, David Berger, Frank Bosl, Richard Conrad, Elizabeth Dunn, Carol Heltzel, Maxine and Ted Misselwitz, Gwen Rench, Pam Sheets

#### Port of Seattle Staff:

Sarah Dalton, Rachel Garson, Marsha Holbrook, Ron Seymour, Bob Wells

#### Consultants:

Claire Barrett, Paul Dunholter, Ryk Dunkelberg, Mary Vigilante

#### Others:

Jamie Erdt, Claire Impett, Diane Larson, Jim Mast, Scott Ridge

#### Handouts:

- Meeting Agenda
- List of CAC and TAC members
- Revised Section III of the Review of Airport and Airspace Actions, dated 4/6/99
- East Turn - An Alternative Solution submitted by the Leschi Community Council, dated 4/7/99
- flight track map dated 7/27/98 submitted by C. Heltzel of Mercer Island

#### Meeting Minutes:

R. Seymour began the meeting by announcing that the topic, flight tracks, was a long and complex one, and that the meeting could be expected to last longer than the usual two hours. After everyone in the room introduced themselves, R. Seymour presented the agenda saying that there would be time at the end of the meeting for comment from non-member attendees. That period would begin no later than 8:30 PM.

R. Dunkelberg began presenting the material by pointing to a list of preliminary recommendations included on the meeting agenda. R. Dunkelberg reminded people that the Study was started under the premise that the low hanging fruit had already been picked. This statement refers to the fact that the most achievable actions to reduce noise around Sea-Tac Airport have already been taken. Therefore, results from the recommendations from this Study are expected to be incremental.

R. Dunkelberg remarked that this preliminary recommendation list contained more potential benefits than were originally expected due to improvements in technology which have become more available. He asked that everyone keep this list in mind throughout the presentation, so that comments might be focused on anything which has been left off the list

### **North Flow - East Turn**

M. Vigilante introduced the proposed departure procedure for north flow - east turn. She emphasized that new flight management system (FMS) and global positioning system (GPS) technology allows for a more precise adherence to a noise abatement flight track. However, M. Vigilante pointed out that closer adherence means concentration of aircraft in a narrower corridor than is the case with less precise instruments. The proposed recommendation in this case is to develop an FMS procedure for southbound aircraft similar to the existing one for eastbound flights in north flow conditions.

P. Dunholter showed a map of the existing east bound (Mountain) FMS procedure and the proposed southbound (Suma) procedure. He pointed out how much tighter the flight tracks were with FMS than without on the Mountain procedure, and showed an SEL (single event level) contour for an MD 80 aircraft using these procedures. The MD 80 is likely to be the noisiest aircraft equipped with FMS.

Although aircraft using FMS were much tighter than those without this equipment, the east turn over Lake Washington is less tightly flown than the rest of the procedure with several tracks passing north over Medina. S. Ridge of Alaska Airlines suggested that this turn could possibly be improved with better instructions in the procedure.

B. Rudolph pointed out that even the ideal flight track turns somewhat north of the middle of the Lake rather than exactly at the midpoint. As a result, when aircraft stray, they fly over Medina.

J. Bloomenthal commented that concentration of flight tracks is desirable over industrial or water areas, but is not desirable over residential areas. This is a key issue when considering flight tracks.

G. Spencer commented that concentration of flight tracks leads to predictability especially when purchasing a home.

J. Bloomenthal asked whether FMS can be turned on and off, so to speak. In other words can it be used for part of a flight track rather than the whole length? J. Mast of the FAA said that precise adherence to a track is also dependent on whether the pilot uses autopilot or flies by hand. He speculated that autopilot technique is more accurate.

B. Self of Southwest Airlines pointed out that all aircraft do not have FMS, but he believes that traditional procedures can also be tightened to approach equivalent accuracy.

M. Anderson asked whether pilots can be instructed to use autopilot only. The answer is no; pilots are in charge of how they fly. B. Self also pointed out that pilots can sense problems quicker when flying by hand.

### **North Flow - West Turn**

M. Vigilante described the Duwamish/Elliott Bay west turn saying it is a perfect place for FMS procedures, because this technology allows a flight track over the industrial areas, river and Bay. Staying along the Duwamish corridor helps aircraft avoid Beacon Hill and other neighborhoods north of the Airport. Accuracy in Elliott Bay means that aircraft keep away from both West Seattle and Magnolia.

P. Dunholter showed flight tracks both with and without FMS, and described the three current westbound procedures. Two of them already have FMS procedures in place. The preliminary recommendation is to develop an FMS procedure for the third, southbound procedure.

J. Bloomenthal asked how long it takes to develop a new FMS procedure and was told at least 12 to 18 months. The procedures must be approved at the FAA center in Oklahoma City before being published. M. Anderson requested that the procedural steps for approving FMS be provided, and J. Mast agreed to do so.

### **South Flow - West Turn**

M. Vigilante introduced a proposal to develop a new track, for noise abatement purposes, for late night departures going south and turning west. Aircraft would continue further south than currently, generally following I-5 and turning west through Commencement Bay in Tacoma.

P. Dunholter showed the flight track and a population analysis which indicates that the new route has the potential to reduce the population exposed to nighttime noise by 20%.

S. Alexander pointed out that the more southerly the aircraft fly, the more conflict there is with aircraft operating at McChord Air Force Base.

L. Docter said that any change in removing the aircraft from turning over Federal Way was desirable. R. Kennedy suggested that the proposed track be amended slightly to follow I-5 more closely and possibly staying east of I-5 before turning.

### **EVA Air**

P. Dunholter described a voluntary approach for reducing the impact of the late night EVA flight. It would combine the FMS Duwamish/Elliott Bay departure during north flow with the Commencement Bay departure, described in the previous section, during south flow. Whenever weather allowed and a choice of runway is possible, the north flow departure would be encouraged.

J. Combs asked how foreign flag carriers can stop in two U.S cities. R. Seymour responded that they can fly passengers from both New York and Seattle to Taipei, but cannot carry passengers between the two U.S. cities. All passengers getting on the flight in either New York or Seattle must have Taipei as their final destination

R. Clark suggested fines for airlines which stray from the noise abatement flight track. R. Seymour answered that the Port of Seattle has no authority to do that, but that the Fly Quiet

program to be discussed at a later meeting offered an opportunity to increase compliance. S. Anderson commented that FAA is very strict about night procedures, and that compliance has improved.

B. Rudolph suggested that the nighttime Duwamish/Elliott Bay turn hours be extended from the current 10PM to 6 AM curfew to possibly a 8PM to 7AM curfew. Lynae Jacobson of the Port of Seattle Noise Abatement Office said that this recommendation has not been adopted in the past due to high traffic levels, and that there may be data on that issue from past studies.

## **Arrival Procedures**

M. Vigilante described the idea of installing a differential GPS tower at Sea-Tac to improve arrival flight track compliance and eventually replace the existing ILS (Instrument Landing System).

P. Dunholter explained that the new curved, arrival flight track through Elliott Bay would be the reverse of the Duwamish/Elliott Bay departure described previously. He emphasized that a curved arrival procedure of this kind does not yet exist at Sea-Tac or elsewhere yet, but that the technology was evolving to a point where it might be possible in the future, possibly 5 to 7 years down the road. Once the technology exists, P. Dunholter suggested that it would take at least two years to develop the procedure. This arrival procedure would only be used during low volume traffic, because it could not handle peak traffic flow.

S. Alexander emphasized that from an FAA perspective this approach is not technically feasible yet, and could only be considered during the night when traffic levels are low. L. Docter asked whether it is possible to have two arrival streams: one using GPS and the other using traditional ILS. D. Larson, representing FAA, responded that it might be possible in clear weather, but it would be difficult due to the position of the two parallel runways at Sea-Tac, which are too close for independent operations.

M. Anderson asked if GPS were coming anyway to Sea-Tac. S. Dalton, Port of Seattle, responded that it was, but for different reasons. It is being considered as part of a new technology initiative for a Category I approach to Runway 16R, and eventually to the new third runway. S. Ridge of Alaska Airlines added that this technology may allow for simultaneous approaches to the existing parallels.

## **Propeller Aircraft**

P. Dunholter described the issue of propeller aircraft circling west of the Airport waiting for an opening in the jet arrival stream, so that they could be quickly sequenced for landing. This proposal recommends working with controllers to find ways to more efficiently sequence these aircraft to reduce their waiting and circling time.

G. Spencer asked whether they could be kept at a higher altitude. P. Dunholter responded that this was considered, but the controllers need to keep them low enough, so that they can be sequenced quickly.

A new issue to investigate was raised. The committee wishes the consultant team to consider whether propeller departures at night could be directed to avoid neighborhoods, primarily not having immediate turns but rather flying straight out for a greater distance. R. Seymour agreed to investigate this idea.

Another issues raised was the possibility of producing a scatter noise contour; that is a contour reflecting aircraft dispersing from the flight track center line. P. Dunholter agreed to consider how to develop this contour.

### Citizen Comments

Several citizens from Leschi spoke on the issue of concentrating tracks over their neighborhood. At issue specifically is the eastbound turn during north flow when aircraft turn just before crossing Lake Washington. Noise during the evening and early morning was mentioned as particularly annoying. Leschi citizens do not feel that they should experience all these aircraft, and that spreading rather than concentrating the flight track is preferable. People complained about not being able to hear on the telephone and not being able to work with an open window. One citizen compared his reaction to road rage.

R. Seymour responded that the team would look at the possible window for the eastbound turn; that is the actual point where the turn commences to see if there is any opportunity for flexibility.

J. Barber presented a proposal for an alternative turn procedure.

C. Heltzel of Mercer Island described a previous scatter departure test where complaints increased to such an extent that the test was cancelled early. Although many people spoke against the scatter at that time, no one spoke in favor. She did not support changes to the existing 8 DME and 4,000' east turn procedure. She spoke in favor of instituting an FMS procedure for the southbound Suma departures, and cautioned about the reaction to any flight track change.

### Additional Items for Study

The following items were identified as issues to be evaluated for the next Operations Sub-Committee discussion of flight tracks:

- Scattered vs. concentrated flight tracks on the north flow - eastbound turns
- Scattered turn contours for entire Airport
- Possible adjustments to the current north flow - east turn to improve its accuracy
- Options for north flow - east turn to improve conditions in Leschi
- Description of FMS development and acceptance process
- Evaluation of using vectors to keep aircraft over I-5 in south flow
- Consider no early turn for propeller aircraft at night
- Look for previous evaluation of extension of nighttime Duwamish departure hours.

R. Seymour announced that there would be a CAC/TAC meeting on May 19, and an Open House at Highline High School on May 20. The next Sub-Committee meeting will be on June 9, 1999.

**The meeting adjourned at 9 PM**

**Sea-Tac Part 150 Study**  
**Operations Sub-Committee**

June 9, 1999

**Meeting Minutes**

**Attendance:**

***Committee Members:*** Duane Anderson, Mike Anderson, Jules Bloomenthal, Rose Clark, Jim Combs, Lloyd Docter, Jamie Erdt (substituting for Suzanne Alexander), Al Furney, Dick Haferbecker, Clare Impett (substituting for Cynthia Stewart) for Richard Kennedy, Cayla Morgan, Mike Rees (substituting for Betty Vie), Bob Rudolph, Guy Spencer, Eric Tweit

***General Public:*** John Barber, Drew Blazey, Frank Bosl, R. Bryan Cairns, David Chapman, Suzanne Cohen, Betsy Dennis, Anne Depue, Elizabeth Dunn, Dave Eiseman, Steve Glueck, E.G. Grundy, Carol Heltzel, Lorelei Herres, Brent Hillard, Bruno Lambert, Coco McDougall, Thomas Morgan, Dinae Morris, Phil Ohringer, Mike Ranta, F. Gwen Rench, Grahame Ross, Eric and Margaret Rothchild, Pam Sheets, Joan Singler, Diane Snell, Seula Stefanopolos, Cathy Tangen, Glenn Whitestone, Steve Workman, Michael Utt.

***Port of Seattle and Consulting Team:*** Claire Barrett, Paul Dunholter, Ryk Dunkelberg, Lynae Jacobson, Robert Kikillus, Bob Hennessey, Mary Vigilante, Bob Wells

**Handouts:**

Agenda  
Revised Flight Track Document dated 6/9/99  
Policy Excerpt from Public Participation Plan dated 11/20/97

**Introduction:**

Bob Wells asked everyone to introduce themselves since there were many newcomers present. He introduced the discussion by saying that the topic of flight tracks was bound to elicit much comment. The proposed meeting format was to have a brief presentation of the work prepared by the consulting team,

followed by a committee discussion, followed by comments from the general public in attendance.

Mary Vigilante introduced the consultant presentation by remarking that the results produced by the analysis were certain to generate comment from the committee and that the purpose of the meeting was to hear these comments. She pointed out that the issue of flight tracks is generally a volatile and controversial and that the question of concentration vs. dispersal of flight tracks is often difficult.

Paul Dunholter then proceeded to describe the flight tracks he had modeled showing the both DNL and SEL contours produced for the analysis. Dunholter explained that SEL contours were also produced for some of the alternatives, because there was little impact on the DNL contours. The modeled flight track changes generally occur beyond the area within the 65 DNL noise contour. For reference information Dunholter described the noise impact of SEL levels as follows: 80 SEL is generally the level where speech interference starts to occur, and 90 SEL is generally the level where sleep interference starts to occur.

#### North Flow – East Turn

Dunholter began with the North Flow East Turn, where the procedure modeled was a scattered departure with multiple headings after the aircraft reach an altitude of 4,000'. His major finding was that there would be a significant increase of population affected by this procedure. At 80 SEL the scattered procedure would increase the population affected from 83,000 to 179,000, or 96,000 people. Total population comparisons between current and scattered procedures were included in the handout at various SEL levels.

Dunholter explained that on a busy summer day approximately 220 jet aircraft were directed east from Sea-Tac daily. In the scatter procedure modeled, these aircraft were distributed as follows: 70 flights to the south, 120 flights in the current flight track, and 30 flights to the north.

Mike Anderson commented that he wanted some information describing the actual effect on people of this scattered procedure – something between SEL and DNL, which would account for the duration of the noise of these events and their annoyance level. Al Furney suggested that Time Above might be the best metric to describe this circumstance.

Lloyd Docter pointed out that since newer aircraft, which are quieter than older ones also have FMS, they would be the early turning flights. Thus, the early turning flights would be quieter than the later turning ones. Paul Dunholter replied that this was generally, but not completely true.

Bob Rudolph stated that repetition of overflight was the biggest problem and that spreading would reduce this. He described the ideal dispersion as four quadrants with about 35 daily flights distributed evenly to each one during the sixteen hours when the east turn is used. Dunholter replied that the actual distribution would not be that even, since the majority of aircraft head south.



### North Flow – West Turn

The proposed recommendation in this instance is to develop FMS procedures for all Elliott Bay departures, as this technology would concentrate flights in the middle of the Bay and reduce the dispersion of tracks over Magnolia and West Seattle.

Al Furney asked whether a contour had been modeled for these FMS procedures. Paul Dunholter replied that it had not. Furney requested that one be produced to determine what the noise levels would be in West Seattle and Magnolia.

There was also a question as to whether introducing FMS would have any impact on operations at Boeing Field, which also uses Elliott Bay for operations. Dunholter replied that it would not have any affect, which was confirmed by FAA. Jamie Erdt explained that Boeing Field and Sea-Tac traffic were separated by altitude over the Bay.

### South Flow - Nighttime

Paul Dunholter simply explained that this nighttime departure procedure over the Port of Tacoma was unchanged from the last Operations Committee meeting when it was previously explained.

### South Flow – Dispersed Procedures and I-5 Corridor

Dunholter described the dispersed procedure as immediate turns at runway end to headings separated by 15 to 20 degrees: one would be east, one straight and one west. He emphasized that he did not know if this was actually feasible from an air traffic perspective. The 360 daily jet flights for a 100% south flow day would be relatively evenly distributed between the three departure headings.

The areas that would experience increased noise would include Des Moines marina and Kent. SEL contours indicate that there would be an increase from 123,000 to 188,000 or 65,000 people at 80 SEL. The DNL contour would show a decrease from the current conditions, because roughly one third of the departures would move more quickly towards Puget Sound.

Al Furney asked again if there was a way to understand how many 80 dB events per day would be experienced by people under each of these tracks.

Lloyd Docter expressed the view that it was better to divide the flights into three corridors than to keep them all in one.

Richard Kennedy pointed out that the handout did not include this map and requested a 11 x 17 version of the south flow dispersal map shown on the board. He requested the same for the I-5 corridor version.

Paul Dunholter briefly discussed the I-5 corridor in south flow saying that the FAA did not find it possible due to potential conflicting flight patterns. From a noise perspective, it doesn't show much change from the current flight track in either SEL or DNL.

Jules Bloomenthal was interested in an I-5 arrival corridor in South Flow.

#### Committee Discussion

Al Furney began the discussion by commenting that he felt the need for more information regarding the impact of these dispersal alternatives.

Richard Kennedy and Lloyd Docter both expressed support for the dispersed alternatives.

Al Furney referred to the Expert Panel's interest in studying minimum population flight tracks.

Jules Bloomenthal felt that flight track discussions should occur within the context of the likely future increase in the number of operations at Sea-Tac. He emphasized that minimum population alone should not be the goal. Concentration can be good where there are good corridors, but dispersal is desirable elsewhere.

Guy Spencer requested more information on speech and sleep interference levels, and what the impact of these flights would be over all the areas they would cover.

Mike Rees also requested more information particularly in the area of flight frequency and Time Above.

Paul Dunholter suggested that it would be possible analytically to identify specific locations or points to predict noise levels at those locations under the different scenarios.

Lloyd Docter felt that there was a danger of analysis paralysis and this was primarily a political issue. He emphasized that this issue requires a regional political will.

Richard Kennedy said that population alone is not the major issue, since impacts are not equal over all populations.

Bob Rudolph pointed out that the Expert Panel favored the maximum use of the Duwamish/Elliott Bay corridor, and that this was not happening in his view. He felt that there had been a major shift in traffic towards the east rather than the west.

Rose Clark was interested in the health effects of noise and felt that these would be reduced if aircraft were spread over a wider area. She expressed the view that it is better to hurt a lot of people a little than to hurt a few people a lot.

Eric Tweet explained that the City of Seattle was still developing its position on dispersal of flight tracks and potential shifting of noise.

Jim Combs asked two questions:

1. What is the actual capacity constraint of for departures in Elliott Bay?
2. How many SUMA departures could be directed to ELMA instead?

Jamie Erdt of FAA replied that there might be some more capacity in Elliott Bay, but the amount depends on which aircraft and when.

Mike Anderson reiterated that he would like to understand the amount of disturbance that would be felt by people under the various options under consideration.

A discussion then ensued about the wording in one of the Public Participation Plan policy statements. The consensus of the Sub-Committee was to take a recommendation to the full CAC/TAC. The recommendation would be to delete the words "not shift noise from one residential community to another" from the first bullet, so that it would read merely: "The proposed Part 150 noise mitigation program will improve the overall noise environment." The sub-committee then agreed to recommend that language change and to support a fair sharing of noise impacts.

Bob Wells clarified the Port of Seattle's position. He explained that consensus points would carry the most weight with the Commission. Actual vote counts would not influence that position particularly, since minority views would also be taken into account. The final Part 150 report will describe all points of view including both consensus and controversy.

Lloyd Docter wanted to codify the committee's discussion so far. He suggested that in addition to the proposed policy change the committee agreed that it needed more information and an ability to quantify irritation caused by the various alternatives.

Mike Anderson suggested that another consensus point was to use the Duwamish/Elliott Bay corridor to the maximum extent possible. Mike Rees took issue with this point saying it was an issue in Magnolia. Anderson replied that

the increased use of FMS would keep planes away from both Magnolia and West Seattle.

Jules Bloomenthal wanted to record a preference to scatter flights where there is no defined noise abatement corridor. Eric Tweet replied that there was not enough information on impacts to take that position yet.

Public Discussion:

The floor was opened to members of the public who attended the meeting. The first request was for a show of hands for those who favor dispersal or scattering of flight tracks. There was a majority of participants, mostly from Leschi, who favored this view with a minority, mostly from Mercer Island, who were opposed.

A summary of other comments follows:

Leschi feels that even dispersal concentrates tracks over its neighborhood.

Children are very affected, as they can't play outside. Most children in the Seattle area live northeast of the airport.

Frequency of overflight is the main problem. It is disconcerting to look at three aircraft in the air at once.

Time of day is a big issue. Early mornings especially on weekends are especially annoying.

Noise in Leschi has become significantly worse over the past twenty years. What will the future hold?

Outdoor speech in Leschi is almost impossible. Scatter is a good short term solution, but will not help as air traffic increases.

There is a myth that Mercer Island has no noise. This is not the case.

Turning flights west over Puget Sound is a good thing.

There was a scatter test conducted on east turns in 1989. Leschi and Mt. Baker areas lodged the highest number of complaints.

A resident of Bell Town said that in his experience Mercer Island is quieter than Leschi.

A resident of Leschi said that friends on Mercer Island would not want Leschi to have this much noise.

A Medina City Councilor supported equitable sharing of the noise and voiced suspicion of those who wish to avoid all annoyance.

A resident commented that the quality of the discussion among committee members was impressive.

Another was impressed that quality of life was the major issue not property value.

The next Operations Sub-Committee will meet on July 14, 1999 at 6 PM. The topic will be other operational issues other than flight tracks.

## Sea-Tac Part 150 Noise Study Update

Minutes of the Operations Subcommittee Meeting  
July 14, 1999 6:00-8:00 p.m.  
Sea-Tac Airport

Topic: Ground Noise and Noise Barriers

### Present:

#### Citizens' Advisory Committee, Technical Advisory Committee Members:

Dwayne Anderson	(King County District #5)
Mike Anderson	(King County District #8)
Jules Bloomenthal	(King County District #10)
Rose Clark	(City of Burien)
Al Furney	(King County District #13)
Betty Ivie	(King County District #4)
Bud Jones	(City of SeaTac)
Richard Kennedy	(City of Des Moines)
Robert Rudolph	(King County District #6)
Guy Spencer	(City of Normandy Park)

#### Technical Advisory Committee:

Suzanne Alexander	(FAA, Seattle)
Dick Haferbecker	(Alaska Airlines)
Cayla Morgan	(FAA, Seattle)
Eric Tweit	(City of Seattle)

#### Citizens:

Elizabeth Dunn	(Leschi Community Council)
Carol Heltzel	(Mercer Island)
Lorelei Herres	(Mercer Island)
Pam Sheetz	(Leschi)
Frank Bosl	(Leschi)
Allyson Jackson	(Medina)
Bryan Cairns	(Mercer Island City Council)
Diane Morris	(Leschi Community Council)
Mike Rata	(Leschi)
Gwen Rench	(Leschi)
Ed Singler	(Leschi Community Council)
Thurston D. Muskelly	(Leschi)
William Hughes	(Leschi)
Linda Pallas	(Leschi)
Dan Pallas	(Leschi)
James Alls	SCAA
Soula Stefanopoulos	SCAA, Madrona
Cathy Tangen	(Leschi)
Steve Workman	(Leschi)

Nancy Workman (Leschi)  
Brent Aillard (Leschi)  
Maurin McBroom (Leschi)

**Port of Seattle Staff:**

Lynae Jacobson  
Ron Seymour  
Bob Wells  
Stan Shepherd  
Rob Kikillus  
Marsha Holbrook  
Sarah Dalton

**Consultant Team:**

Claire Barrett (Claire Barrett & Associates)  
Paul Dunholter (BridgeNet Consulting)  
Ryk Dunkelberg (Barnard Dunkelberg & Co.)  
Mary Vigilante (Synergy Consultants)  
Michael West (Pacific Rim Resources)

**Total: 48**

**Handout:**

1. Agenda
2. Review of Airport Plan Actions

**Agenda:**

- I. Introduction, Announcements
- II. Discussion of revised schedule
- III. Discussion/Presentation of Outline Actions
- IV. Committee Discussion of Actions
- V. Discussion/Comments from Audience
- VI. Other Business

**Introductions, announcements:**

Ron Seymour greeted those attending and announced that the topic of the evening's meeting would be ground noise and noise barriers. The topic of the previous subcommittee meeting, flight tracks, would be addressed again at a future meeting but not at this one.

Ryk Dunkelberg announced changes to the project schedule and the schedule of meetings. The next meeting of the Land Use Subcommittee, scheduled for Aug. 19, has been cancelled. The next meeting of the Operations Subcommittee, scheduled for Aug. 18, will be devoted to the methodology to be applied to processing questions and comments from the public and responses. Specifically Paul Dunholter is developing a methodology to assess the community disturbance levels which might result from dispersed flight tracks. Dunkelberg asked committee members with thoughts on this topic to speak to Paul after the meeting or e-mail him directly at PHDAEN@aol.com.

There will be no meetings in September. The next two months (August-September) will be devoted to data processing and the methodology for handling public comments. R. Dunkelberg will revise the schedule of meetings and distribute it to committee members. It will also be posted on the project website.

Rose Clark referred to the "Statement of Part 150 Objectives by the SeaTac Citizens Advisory Committee" and said that an updated version of the document had been sent. R. Dunkelberg said he had not yet received it. R. Clark stated that further revisions would be made to the document. She expressed concern about record-keeping at meetings and asked whether or not all meetings were taped. R. Seymour replied that the Citizens Advisory Committee and Technical Advisory Committee meetings were taped but not the subcommittee meetings. Minutes from all committee and subcommittee meetings are posted to the website.

Rose Clark and Bob Rudolph both expressed concern about recent news articles on flight tracks saying that they were inaccurate, and that the Part 150 committees were trying to avoid divisiveness.

R. Seymour discussed changes to meetings and suggested that meetings be cancelled if not all information was available. The committee's recommendation was to avoid last-minute cancellations and proceed with whatever data is available for a given meeting.

Paul Dunholter then presented a review of Airport Actions.

### **Action Item 1: Fly Quiet Approach**

The Fly Quiet Approach is a group of voluntary programs to encourage airlines and pilots to operate aircraft in ways that minimize impacts to people living around the Airport. A formal Fly Quiet Program is not in effect at Sea-Tac Airport; however, the Port of Seattle monitors compliance for a number of noise abatement programs. The technical resources of the current noise and flight track monitoring system limit the monitoring of compliance. However, a new noise and flight track monitoring system is being installed that will expand the capabilities for compliance monitoring.

### **Noise Impact Issues**

Potential elements of a Fly Quiet Approach include:

- single event noise levels
- flight path compliance
- departure climb gradients
- arrival glide slope
- minimum altitude goals
- complaints from residents

Fly Quiet Implementation elements include:

- Identify goals in terms of
  - noise levels
  - levels of compliance
- Identify methods of measurement
- Develop measures of compliance

Measurements of compliance might include:

- Public notice and ranking of airline compliance
- Pilot incentives to reward compliance
- Estimated performance targets
- Working with pilots to improve poor achievement levels

Question from Jules Bloomenthal: Can the Port compel pilots to comply?



Answer: No. However, notifying pilots of poor compliance is a first step. Pilots often don't know that their procedures are creating more noise. An incentive system is often an effective alternative to penalties.

Comment from Dick Haferbecker, Alaska Airlines: Once pilots have been told what they're doing in terms of making noise, they are good about changing their behavior to make less.

### **Action Item 2: Limit Numbers or Types of Operations or Types of Aircraft; Limit Number of Nighttime Stage 2 < 75,000 lb. Operations**

**Situation:** Aircraft under 75,000 lb. are not included in the Federally required phase-out of Stage 2 aircraft by the year 2000, thus they may continue to legally operate after Jan. 1, 2000. Aircraft in this category are generally corporate jets and small commuter or regional jets, such as the Fokker F-28 flown by Horizon Airlines. Mandated restrictions or limits on these aircraft would require a Part 161 Study. There is no limit on the numbers or types of operations of these aircraft at Sea-Tac Airport.

Limitations on the numbers or types of operations or type of aircraft could reduce potential future noise impacts during nighttime hours. An evaluation of both existing and future operations by such aircraft would be required to determine the effectiveness of such a limit.

Under Part 161, actions affecting Stage 2 aircraft would require FAA approval of the cost-benefit methodology. The FAA does not have to approve the ultimate restriction, if one is recommended, as it does for a Stage 3 restriction. However, all of the elements required for a Stage 3 restriction must be completed for a Stage 2 restriction, and the same constitutional issues must be addressed.

This mitigation option is to explore voluntary alternative programs to achieve desired results without the need to conduct a full Part 161 study. Voluntary programs are the most effective and quickest method to implement a proposal in the current regulatory environment.

Horizon Airlines has scheduled the replacement of its F-28 aircraft with significantly quieter Canadair Regional Jets (CRJs), manufactured by Bombardier. Replacement is scheduled to begin in August 2002 and should be completed by early 2006. A voluntary program to accelerate replacement would reduce the impacts of these aircraft quicker than planned. One possible action might be a voluntary restriction of nighttime F-28 operations by the end of 2003.

Dick Haferbecker commented that the scheduled replacement is a function of the production timetables and capabilities of the aircraft manufacturer. Many different airlines have ordered CRJs. Horizon has attempted to negotiate with other airlines to "move up" in the queue of airlines waiting to take delivery, but so far negotiations have not been successful.

### **Action Item: National Noise Issues (Claire Barrett)**

Claire Barrett discussed the current status of noise issues nationally. Jan. 1, 2000 marks the retirement of all Stage 2 aircraft over 75,000 lbs. from the U.S. commercial fleet. This milestone marks the culmination of a phase-out schedule developed under FAR Part 91, which was mandated by the Aviation Noise and Capacity Act (ANCA) of 1990.

Since 1990, some conditions have changed such that there are more modified Stage 2 aircraft remaining in the fleet than originally predicted. As a result, there are several post-2000 noise issues which can only be addressed at the national level:

1. Several hush-kits, weight and flap setting adjustments and other techniques have been introduced which did not exist when the phase-out schedule was adopted. Many older 727, DC-9 and 737 aircraft use these hush-kits.
2. There is a significant difference in noise levels between aircraft manufactured as Stage 3 and those treated to meet Stage 3 levels.
3. There is no phase-out schedule for aircraft under 75,000 lbs.
4. Pressure is growing in the U.S. and abroad to develop a Stage 4 standard.

These issues can only be addressed at a national level because individual airports cannot make regulations regarding the national aircraft fleet, and Part 161 severely limits local airports' rule-making ability.

**Sea-Tac situation:** The Sea-Tac fleet does not have a significant number of hush-kitted aircraft; however, it does have a higher than average mix of older aircraft, primarily F-28s, weighing less than 75,000 lbs. Sea-Tac also has a considerable number of Stage 3 aircraft such as MD-80s that produce higher noise levels than some of the newer models.

**Noise Impact Issues:** Attempts by the European Union (EU) to ban hush-kitted aircraft from their airports have placed pressure on the FAA to develop an updated noise program. Consequently, there may be a national program to consider:

- Potential new phase-out schedule for:
  - Hush-kitted Stage 2 aircraft
  - Raisbeck and similarly treated aircraft
  - Stage 1 and 2 aircraft under 75,000 lbs.
- Defining a difference between older Stage 3 manufactured aircraft and newest models.
- Development of a Stage 4 standard
- Development of a U.S. position vis-à-vis the EU
- Updating post-2000 INM predictions and calculation methodology
- Consideration of new or updated land use strategies
- Evaluation of relationship between noise and air quality goals and regulations.

**Sample recommendations:** Building on Seattle's role as a national leader in noise issues, the Port of Seattle and citizens work jointly to participate in a process to treat these issues and develop a new national noise policy.

Betty Ivie questioned whether foreign carriers operating in the U.S. are also subject to this rule. Barrett replied that they were.

There was also a discussion about the probability of FAA granting any exemptions to this deadline. None have been granted so far.

#### **Action Item: High Speed Exit Taxiways**

High-speed exit taxiways connect the runway to an adjoining taxiway at an angle of about 30 degrees, enabling the aircraft to exit the runway at higher than normal speeds, and spend less time in the landing roll. High-speed taxiway use can reduce the amount of reverse thrust used by landing aircraft.

**Sea-Tac Situation:** The primary landing runway at Sea-Tac is the west runway (16R/34L). During nighttime low-activity hours, the east runway (16R/34L) is used more often than in daytime. During south flow, when landing on 16R, aircraft have access to 3 high-speed taxiways; aircraft

landings on 16L have access to 4 exits. During north flow, landings on 34L have access to 3 high-speed exits; landings on 34R have access to 4 exits. For south flow, the most common high-speed exit used is Taxiway N; for north flow, the most common high-speed exit is Taxiway H.

#### **Action Item: Thrust Reverser Noise**

Background: Pilots utilize thrust reversers to slow the aircraft on landing at a rate that is appropriate for conditions. The maximum allowable power setting for thrust reversers is 85 to 90 percent. Thrust reversers are most effective at high speed soon after touchdown. Larger aircraft require greater use of thrust reversers due to increased weight. Brakes cannot be applied until the aircraft has sufficiently decelerated. Under certain weather conditions (i.e., rain and especially ice) brakes are much less effective and so thrust reversers are deployed longer.

Characteristics of thrust reverser noise:

- Short-duration event (avg. 20-25 seconds)
- Quick on-set and drop-off rates for noise
- Frequency characteristics include a large low-range frequency component
- Large variability of noise level from event to event
- Magnitude of noise typically lower than departure noise.

Variability in Thrust Reverser Noise

Factors affecting noise levels generated from the use of thrust reversers include:

- Pilot technique
- Runway breaking action
- Weather (temperature, humidity, cloud cover, wind, inversions)
- Aircraft weight
- Taxiway used for runway exit
- Airport operational activity level

Dunholter then presented three examples of noise levels for thrust reversers for three different aircraft: a 747, a 757 and an MD-80, all arriving on Runway 16R. Data presented was collected from measurement site RMS5 on the west boundary of the Airport (Burien S171 and 12<sup>th</sup> Ave S.). The examples compare and contrast lighter narrow-body aircraft and heavier wide-body aircraft. In general, wide-body aircraft and narrow-body Stage 2 aircraft generate higher noise levels than narrow-body Stage 3 aircraft. However, for thrust reversal arrival noise, aircraft type is not as important as with departure roll noise. In general, noise from thrust reverser use was lower at night than during the daytime. Among all sites this difference was measure to be about 2dBA.

Proposed Mitigation Alternatives:

A. Reduced Use of Thrust Reversers. Lower thrust power has a lower maximum noise level, but it slows the aircraft at a slower rate, thus increasing the duration of the event. Note that the use of thrust reversers is entirely at the pilot's discretion for safety reasons and cannot be mandated by the Airport or the FAA.

B. Taxiway Use. The length of available runway for stopping aircraft and the number of available taxiways can also affect the amount of noise generated by thrust reversers. With a longer available stopping distance and more potential exits, pilots have the option of using thrust reversers at a lower maximum power level. This increases the duration of the event, but analysis shows that the energy average SEL noise levels were lower when the full runway was used.

C. Runway Use. Results of measurements showed that thrust reverser noise levels measured in the community are slightly lower on average for aircraft landing on the east runway (34R/16L) versus the west runway (34L/16R). This difference is about 2dBA.

Sample Recommended Actions: Recommendations include a number of measures subject to further consideration prior to implementation.

- Utilize the east runway (34R/16L) during nighttime low activity for arrivals. This runway has more options for exits.
- Develop procedures for taxiway utilization during nighttime low activity periods. It is recommended that the Port of Seattle work with the airlines to study the implementation of procedures that judiciously take advantage of the additional stopping distance to minimize use of thrust reversers during nighttime hours. The implementation and monitoring of the program could be through the voluntary Fly Quiet Program.

Al Furney asked how thrust reverser noise is accounted for in the noise model and noted the predominance of low-frequency noise. Dunholter replied that it is accounted for in the model by an average noise level by aircraft type.

Bob Wells pointed out that six high speed taxiways have been added to the airfield since 1990, but there are none on the east runway since it is too close to the terminal ramp area.

Guy Spencer said he would like to see a noise contour for thrust reverser noise.

### **Action Item: Noise Barrier Design**

Paul Dunholter presented a list of sources of stationary ground noise and possible noise barriers. Sources of stationary ground noise at the airport include:

- Auxiliary Power Units (APUs) – a small jet engine on the aircraft that provides electrical power, air compression to operate aircraft HVAC systems and air compression for engine starts.
- Ground Power Units (GPUs) – portable carts that provide electrical power and/or compressed air. GPUs are most commonly used by older aircraft, aircraft requiring power for an extended period of time and cargo operators.
- Fixed Power Systems – systems attached to the jetway. Most fixed power systems supply only electrical power; newer systems supply preconditioned and compressed air as well.

Gates and aircraft parking areas at Sea-Tac Airport have a variety of auxiliary power facilities depending on airline and type of aircraft operation.

Noise measurements. Noise levels generated by APUs were measured from a variety of aircraft parked at gates at Sea-Tac. At a reference distance of 100 feet, noise levels from the APU range from 81 to 90 dBA. (At a distance of 250 feet, these noise levels would be approximately 8 dBA less.) Measured maximum noise levels for different aircraft ranged from 81 dBA for an A320 and an L-1011 to 90 dBA for a 727-200, 737-200 and a DC-9.

Discussion moved to the possibility of constructing a noise barrier on the western edge of the Airport. An FAA representative said that due to the topography of the area of the Airport west of the runways and the fact that the runways are so much higher than the ground to the west, the cost of such a barrier would be prohibitive. Rose Clark questioned whether it was in fact more expensive to ruin three communities west of the Airport.

### **Taxi and Idle Noise**

Characteristics of noise from taxiing and idling aircraft include the following:

- Noise is of a lower magnitude than noise produced during take-off and landing
- Multiple aircraft can cause cumulative effects
- High-frequency noise from the front of the aircraft is most significant
- Noise fluctuates in magnitude as power is increased or decreased for aircraft positioning

- Noise is more noticeable during nighttime hours when other aircraft and ambient noise sources are less

#### Taxi and Idle Noise Data

Measurements of taxi and idle noise for various aircraft ranged from 81 dBA for an A320 to 90 dBA for a 727-200. Measurements of multiple aircraft of the same type generally showed a range of plus or minus 5 dBA.

#### Mitigation Alternatives

**Noise Barriers.** Noise barriers are most effective when placed close to the noise source. They are also more effective for noise sources that are not dominated by low-frequency noise.

One mitigation option addresses potential construction of two noise barriers, one near the north cargo area and the other near the south maintenance hangar area. These barriers are designed to shield nearby communities from ground noise sources including APUs, GPUs, engine start, engine idle and taxiing. The south hangar area and the north cargo area near Federal Express are being redeveloped as part of the Airport Master Plan. Barrier mitigation could be included as part of that development plan. The barrier is assumed to be 20 feet high and constructed of absorptive material. Given differences in terrain varying distances from the receiver, noise reduction of the barrier is in the range of 3 to 5 dBA, with most areas receiving 5 dBA of noise reduction.

Dunholter then showed the group a sample of one type of noise barrier, a two-foot square section of plastic blocks that help reduce and absorb noise.

#### Sample recommendations:

1. As more of the terminal areas are refurbished, the Port should work with airline tenants to install complete fixed power systems and preconditioned air.
2. Construct a noise barrier/wall around the north cargo hold area and around the south hangar area.

#### Committee and Citizen Comments

Rose Clark noted that the gas engines used to produce electricity were a source of pollution and were being studied by the King County Health Department for possible cancer links. Paul Dunholter clarified that the GPUs are diesel-powered, but that APUs produce more pollution than GPUs.

Al Furney asked about the status of the study of noise abatement for departure profiles. Paul Dunholter replied that the study is ongoing and welcomed input via e-mail from committee members.

Rose Clark suggested that action items presented at meetings be listed with an indication of their status.

Lloyd Docter raised the possibility of following the Auburn-Kent industrial corridor along Highway 167 as a possible flight track for southbound departures.

Duane Anderson recommended increased use of the Elliott Bay/Duwamish corridor in north flow for southern departures. Dr. Robert Rudolph noted that until 1987 north flow departures used the Duwamish corridor before turning west and then south. He noted a crossover problem near Medford, Oregon as one of the reasons that this flight plan was abandoned.

Mike Anderson requested a status list of action items in the Study to date for the next meeting.

A general discussion of the four-post plan and the possibilities for its modification ensued. Suzanne Alexander offered to give a presentation on basic air traffic control ("Air Traffic Control 101") to interested committee members, but noted that when she last gave this presentation, only two committee members attended.

**How soon can Horizon Airlines' F-28s be phased out?**

Dick Haferbecker repeated his comment that replacement was largely a function of Bombardier's production schedule (Bombardier makes the CRJ, which will replace the F-28 fleet) and out of the airline's control.

**What about re-routing the MD80s?**

Dick Haferbecker replied that certain aircraft tended to be used on certain routes, for example, 737s are normally used on routes to and from Alaska, while MD80s are typically used on routes to California (except Orange County because of special noise restrictions) and Mexico. Haferbecker suggested that Alaska would prefer to route the California-bound flights out the Duwamish in north flow.

Betty Ivie wanted to know how soon the MD 80 fleet would be equipped with FMS, so that they would stay in Elliott Bay and off of Magnolia and West Seattle.

**What is the total capacity of the Elliott Bay/Duwamish corridor?**

Traffic from King County International Airport (KCIA, Boeing Field) will need to be factored into any modification of traffic from Sea-Tac to use this corridor. The capacity of the corridor is being evaluated by FAA.

A citizen expressed the view that the number of complaints should not determine Port policy on flight tracks.

## Sea-Tac Part 150 Noise Study Update

### Minutes of Joint Subcommittee Meeting

Operations and Data Subcommittees

Aug. 18, 1999 6:00-9:00 p.m.

Sea-Tac Airport

#### Topic: Methodology for Supplemental Noise Monitoring

#### Present:

#### Operations and Data Subcommittee Members:

Suzanne Alexander	(FAA, Seattle)
Dwayne Anderson	(King County District #5)
Mike Anderson	(King County District #8)
Jules Bloomenthal	(King County District #10)
Rose Clark	(City of Burien)
James Combs	(City of Seattle)
Arden Forrey	(King County District #2)
Al Furney	(King County District #13)
Dick Haferbecker	(Alaska Airlines)
Mike Rees (for Betty Ivie)	(King County District #4)
Bud Jones	(City of SeaTac)
Richard Kennedy	(City of Des Moines)
Cayla Morgan	(FAA, Seattle)
Robert Rudolph	(King County District #6)
Guy Spencer	(City of Normandy Park)
Eric Tweit	(City of Seattle)

#### Citizens:

Nearly 100 citizens attended the meeting. They represented the communities of Beacon Hill, Bellevue, Leschi, Madrona, Magnolia, Medina, Mercer Island, Montlake and Wedgewood. The sign-in sheet is on file with the Port of Seattle and the consultant team.

#### Port of Seattle Staff:

Lynae Jacobson  
Ron Seymour  
Bob Wells  
Stan Shepherd  
Rob Kikillus  
Marsha Holbrook  
Sarah Dalton

#### Consultant Team:

Claire Barrett (Claire Barrett & Associates)  
Paul Dunholter (BridgeNet Consulting)  
Ryk Dunkelberg (Barnard Dunkelberg & Co.)

Mary Vigilante (Synergy Consultants)  
Michael West (Pacific Rim Resources)

**Total (including citizens): 113**

**Handouts:**

1. Agenda
2. Flight Track Supplemental Noise Analysis Methodology

**Introductions, announcements:**

Ron Seymour greeted meeting attendees and asked the committee members, Port staff and consultant team to introduce themselves. Because of the large number of audience members, Ron Seymour said that rather than have individuals introduce themselves, he would ask audience members to identify which neighborhoods they represented. Audience members identified themselves as residents of Beacon Hill, Bellevue, Leschi, Madrona, Magnolia, Medina, Mercer Island, Montlake and Wedgewood. Ron Seymour described the purpose of the evening's meeting was to discuss the methodology to be used for flight track analysis. While there would be time set aside for public comments at the end of the meeting, Ron Seymour noted this was a meeting of the Operations and Data Sub-Committees and members would have the floor first. He encouraged those audience members who would not have time to comment to submit comments in writing or via phone to the Port or the consultant team.

Ron Seymour also reminded committee members of the ground rule regarding contacts with members of the media. All comments from committee members should be interpreted as speaking only for themselves or their constituents, and that they are not speaking on behalf of the Committee.

Comments by Committee members on minutes from previous meeting of the Operations Subcommittee, held on July 14, 1999:

Rose Clark noted that on p. 3, the word "communities" should be changed to "Part 150 committees" so that the sentence should read: "...the Part 150 committees were trying to avoid divisiveness."

Ms. Clark also requested that a comment she made regarding the construction of noise barriers on the western edge of the Airport be inserted on p. 9. The inserted comment should read: "Discussion moved to the possibility of constructing a noise barrier on the western edge of the Airport. An FAA representative said that due to the topography of the area of the Airport west of the runways and the fact that the runways are so much higher than the ground to the west, the cost of such a barrier would be prohibitive. Rose Clark questioned whether it was in fact more expensive to ruin three communities west of the Airport."

Dr. Robert Rudolph requested a revision in his comment about the use of the Duwamish Corridor on northbound takeoffs on p. 10 to read: "Dr. Robert Rudolph noted that until 1987 north flow departures used the Duwamish corridor before turning west and then south. He noted a crossover problem near Medford, Oregon as one of the reasons that this flight plan was abandoned."

Arden Forrey noted that there had not yet been a response to the document prepared by the Citizens Advisory Committee ("Statement of Part 150 Objectives by the SeaTac Citizens Advisory



Committee"). Ron Seymour noted that the original document had already been modified once, and the Port was waiting to see a final version before responding. Rose Clark noted that the second version of the document was close enough to a final version, and that any subsequent revisions would be minor.

Paul Dunholter then presented the methodology that will be used for flight track analysis. The purpose of the analysis is to provide comparative data to enable the Citizens' Advisory Committee and Technical Advisory Committee to evaluate alternative flight tracks at Sea-Tac Airport as a basis for recommendations.

Four areas of impact are under consideration: flight frequency, population affected, sleep disturbance and sleep interference. Each of these issues requires an appropriate metric. The results will be displayed graphically as far as possible. The four analytical areas are:

1. Probable number of overflights by geographic area
2. Number of people likely to be annoyed by aircraft noise
3. Number of people potentially awakened from aircraft noise
4. Number of people experiencing potential speech interference

Mike Rees asked for definitions of "overflight" and "annoyance." Paul Dunholter noted that professional research on annoyance uses five different categories of annoyance. The two top categories are designated "highly annoyed" and "extremely annoyed", and that community noise analyses of annoyance referred to the two top categories. The noise metric that is used to assess annoyance is DNL.

Jules Bloomenthal asked how speech interference would be measured. Paul Dunholter responded that it would be in Time Above (in minutes). Jules Bloomenthal asked whether the number of overflights would be included in measurements, and Paul Dunholter replied that it would. Jules Bloomenthal noted that a greater number of overflights would result in a higher DNL and thus a greater level of annoyance. Paul Dunholter concurred and noted that DNL was cumulative.

#### Probable number of overflights by geographic area

Daily flights from Sea-Tac Airport will be distributed for each of the six flight track alternatives. The distribution pattern will be based on FAA routing methods; e.g., flights will not be randomly or evenly distributed, but will be assigned according to the actual flights that occur today and on FAA routes and scheduled destinations.

Other features of the proposed methodology include:

- \*Population density maps
- \*Representative location analysis
- \*Methodology based on accepted research on annoyance and sleep disturbance

Paul Dunholter then demonstrated a video animation that would illustrate noise experienced on the ground. The animation showed a transversal bar "taking off" from Sea-Tac Airport and turning to the East. The bar illustrates the single event noise level of an aircraft departure using the metric SEL (Sound Exposure Level). The width of the bar represented the lateral distribution of the given SEL that moved forward along the aircraft's flight track. All of the people living underneath the swath of the bar as it moved along the flight track could be said to experience roughly a similar single event noise level. As the flight track progressed, the bar shrank in width. This corresponded to the aircraft's gain in altitude. Once the aircraft reached a sufficient altitude, the noise level reduced and the bar disappeared.

Mike Rees asked for clarification about the dimension or width of the bar and the relative difference in decibels on either side. Paul Dunholter responded that there was a difference of 3 dB or roughly 3,000 feet on either side. He also noted that most people were incapable of

distinguishing a single event difference of 3 dB. The purpose of the graphic was to illustrate that the noise from an aircraft extends beyond the area directly under the flight track.

Paul Dunholter then showed a color density map, in which minutes above a certain noise value were represented. The model would give a footprint for a given aircraft.

Duane Anderson asked whether this model could be generated to show actual operations, and Paul Dunholter replied that it would be.

Dr. Robert Rudolph asked whether the model could accurately reflect current conditions including flight track dispersal. Paul Dunholter replied that the modeling would include data for current flight tracks, modeling conditions with FMS and modeling conditions without FMS.

Jules Bloomenthal asked whether more measurements could be taken to record as many days as possible. Paul Dunholter replied that existing data represented tens of thousands of flight tracks recorded over four different weeks over the course of four seasons and was sufficient to validate the modeling exercise.

Paul Dunholter continued his presentation by discussing the population density map that will be used. Guy Spencer suggested that one alternative to color density would be to use dots, where one dot would represent a given number of people (100, 200, etc.) This has the advantage of still being comprehensible when reproduced in black and white.

Dr. Rudolph asked whether the population will be analyzed for aircraft turning early as well as late. He theorized that early turning aircraft would affect fewer people. Paul Dunholter replied that the data will be analyzed for both population and noise for the actual flight conditions that occur today and those that are proposed as part of the different alternatives. Paul Dunholter also noted that aircraft turning sooner would be at a lower altitude as they pass over given communities.

Al Furney requested an analysis of noise abatement departure profiles. Paul Dunholter responded that this was certainly one of the alternatives to be considered in the Study, and will be examined after flight tracks. Paul Dunholter cautioned against creating an unmanageable amount of data and said that flight tracks would be sufficiently complicated by themselves.

Guy Spencer said he would like to see departure profile information also. Mary Vigilante questioned how feasible this would be in conjunction with analysis of flight track alternatives. Ms. Vigilante's concern centered on the amount of data that will be presented and the desire to keep it manageable. Paul Dunholter noted that Alaska Airlines had already performed a similar flight test, and that this data could be examined next as one of the alternative noise abatement options.

Mike Rees asked whether all aircraft climbed at the highest possible climb rate. Suzanne Alexander replied that climb rates varied according to aircraft weight and especially safety concerns. Ron Seymour noted that aircraft departure techniques, because of aircraft performance characteristics, involved a "power-down, level-off" technique which, when seen in profile, appears as a terrace effect. That is, aircraft climb to a certain altitude, level off and reduce power, stay at that altitude for some time, and then climb again.

Dr. Rudolph asked how much tunneling occurs at Sea-Tac. Suzanne Alexander replied that nearly all aircraft tunnel when they take off because their flight path nearly always crosses underneath arriving aircraft. Tunneling is unavoidable in many cases, given the proximity of Sea-Tac to King County International Airport (Boeing Field) and particularly given the fact that departing aircraft must necessarily pass below arriving aircraft for safety reasons. Dr. Rudolph asked what percentage of departures from Sea-Tac must tunnel.

Jules Bloomenthal requested that this flight track evaluation methodology also be applied to Boeing Field's (KCIA) Part 150 study, which is currently under way. Mike Anderson asked

whether anything in this study precluded the application of this methodology to KCIA's Part 150 study. Paul Dunholter answered no, but noted that there was less radar data available from KCIA than is available from Sea-Tac.

Paul Dunholter then returned to his presentation and a map that displayed North Flow Data Point Analysis sites (Figure 1a in handout). Arden Forrey noted the absence of any locations north of the 520 bridge. Paul Dunholter reminded the committee members that these sites were chosen to measure departure noise, and not noise from arriving aircraft. Very few departing aircraft pass north of the 520 bridge.

Jules Bloomenthal urged a reconsideration of measurement of total noise impact to include arriving aircraft as well as departing aircraft. He noted the significant impact of aircraft noise on Capitol Hill and said that the number of data points looked sparse. He would prefer to see twice as many data points as currently exist. Dunholter again cautioned against an unmanageable amount of data and described that the grid analysis used to create the density contour maps consist of many more sites. This grid is roughly a point every 1,000 feet. Arden Forrey suggested the addition of one or two representative sites to complement the population density maps. Mike Anderson questioned how difficult it would be to add arrivals. Ron Seymour reminded the committee members that arrivals had already been discussed and of the impossibility of changing arrival flight patterns. Arden Forrey said that a baseline for arrivals was needed.

Duane Anderson noted that there did not appear to be much data inside the Outer Marker and asked why this was. Paul Dunholter replied that the points represented on the map represent data points where a change in aircraft position is likely to happen. Ron Seymour reminded committee members that the earliest possible turn is at 4,000 feet, which is beyond KCIA. Suzanne Alexander reiterated the emphasis on safety and the impossibility of turning before KCIA.

Paul Dunholter then turned to the South Flow Data Point Analysis (handout, fig. 1b). Guy Spencer noted that the I-5 corridor had already been shown to provide little benefit, but wondered about moving flight tracks to the west as a substitute for Option D (the I-5 corridor). He speculated about the possibility of more agricultural or industrial land uses, moving overflights between I-5 and the Valley Freeway (Hwy 167). Rose Clark noted that the Puget Sound Regional Council produced a map of population density that showed fewer people east of I-5 and requested that someone contact PSRC to obtain that map.

Paul Dunholter then moved to a table showing event count results (handout, p. 5). Jules Bloomenthal noted that the three measurements shown were for 80, 85 and 90 SEL and requested that measurements below 80 SEL be displayed. Paul Dunholter reminded the committee members how SEL was calculated and illustrated a measurement of SEL and Time Above. Paul Dunholter noted that SEL represented the area under the peak of the curve for a given duration (in this case, 30 seconds).

Mike Rees cautioned against comparing daytime and nighttime noise, as the two are significantly different.

Guy Spencer requested that the table titles be modified to reflect full and complete dimensions, for example "the number of flights exceeding a given SEL per day."

Dr. Rudolph noted that during Mediation measurements were taken down to 65 SEL and so encouraged predictions to be made down to at least 65 SEL. Paul Dunholter stated that he did the noise work for Mediation and they did not go down to 65 SEL.

Mike Rees stated that data should show ambient noise level of communities.

Richard Kennedy noted that measuring lower and lower doesn't necessarily show how impacted certain areas are. Areas close to the Airport are still more impacted than those far away.

Paul Dunholter then turned to the issue of speech interference and noted that Time Above served as a good measurement. Figures for sleep disturbance measure the indoors sound exposure level (SEL). There has been much recent research on this subject. He then showed the Sleep Disturbance Curve (Figure 3 in the handout). The graph represented comparisons of field studies with the findings of research based upon laboratory studies and more recent field studies. Both curves are presented in Federal Interagency Committee on Aircraft Noise (FICAN) (1997). The field studies showed generally fewer awakenings for higher levels of noise than the findings of laboratory research. The results were initially somewhat surprising to researchers in that the potential for sleep disturbance was lower than expected. Mike Rees concurred that he also had trouble believing the data. He wondered about the level of background noise for the field studies. Paul Dunholter noted that the field studies were conducted near Denver International Airport (DIA) and London Airports and that one explanation for fewer awakenings could be acclimatization of residents to aircraft noise. Mike Anderson noted that everyone is different and what may wake one person may not wake another.

Guy Spencer expressed interest in FICAN data and expressed skepticism that some people would remain asleep at 100dB. Paul Dunholter answered that the FICAN website would provide more information about the research ([www.FICAN.org](http://www.FICAN.org)). Rose Clark suggested that someone check with the Expert Panel for data on sleep disturbance. Al Furney noted that the Expert Panel cited recent studies of the effects of noise on human physiology.

Al Furney noted that the Expert Panel looked at Time Above for 65, 75, and 85 dB. Paul Dunholter said that the methodology would look at Time Above.

Mike Rees asked whether ethnicity would be considered in analyzing demographic data. Paul Dunholter and Ron Seymour emphasized that ethnicity will not be considered as a criteria.

Spencer said that he had trouble with the expression "possible numbers of people annoyed". Mike Anderson noted that there were few other options as actual numbers could not be predicted with absolute certainty. It was proposed that the expression "probable" or "predicted numbers of people annoyed" be used instead of "possible."

Guy Spencer questioned how annoyance was measured. Paul Dunholter referred to a survey by a Dr. Fidell. He noted that the question asked of respondents: "Have you been annoyed by aircraft noise in the last week/month/year?" was then compared with the noise at the individual's home. A committee member suggested looking at the full range of annoyance and not just "highly annoyed" or "extremely annoyed". Paul Dunholter noted that it was difficult to assign meaning to lower levels of annoyance. Mike Rees warned against the misuse of data and the undercounting of annoyance. Arden Forrey suggested some indication of the level of uncertainty.

Guy Spencer raised the issue of annoyance and how this was measured. Was it measured with windows open or closed, for example? He stressed the importance of measuring below 65 DNL.

Jules Bloomenthal noted that the committee would like to have answers to the following questions:

1. Are the meeting minutes posted to the website? Yes.
2. Regarding the use of Elliott Bay for northbound departures, what is the capacity of this corridor?
3. Are there arrival noise abatement procedures for south flow through the Duwamish corridor?
4. Regarding the number of arrivals, are they affected by the FAA's desire to reduce flight delays by reducing the distance between approaching aircraft? In other words, will there be more frequent overflights if the FAA reduces distance between aircraft to reduce delays?

Ron Seymour noted that the data on capacity of the Duwamish Corridor would be presented at the next committee meeting, scheduled for Nov. 17. Mr. Seymour also noted that the subject of that meeting would be to present the results of the flight track alternative analysis.

Rose Clark asked whether Boeing Field's use of the Duwamish Corridor was factored into the data analysis. Suzanne Alexander stated that operations from Boeing Field are put into the equation.

Richard Kennedy referred to an article in the August issue of *Governing Magazine* on Fly Quiet Programs and incentives for airlines to adopt procedures that would reduce noise. He said he would transmit a copy to Ryk Dunkelberg and requested that a copy be entered into the minutes. It was suggested that the website for *Governing Magazine* be given so that others might refer to it.

#### Comments from the public:

1. Jan Glick, Madrona consultant: Concern about northbound departure noise. Consultants thanked for using standard methodology. There are two things missing from the methodology:  
a. the interval between flights should be expressed  
b. summer vs. winter flight patterns should be distinguished (windows open vs. windows closed). There should be higher weighting on a scale that hasn't yet been developed. Conversations can't be restarted if interruptions are too frequent.

2. Concern expressed about throttling down and leveling off.

3. How were the 30 days measured distributed over the seasons? Seymour: Measurements were collected over all four seasons.

4. Why is noise data not used from Seattle? Why use data from London and Denver? Dunholter: Data is from Seattle. Research on annoyance is national and international, however; there is no local research on annoyance. Sleep disturbance studies are extremely expensive.

5. Regarding DNL measurements, if you're averaging across north and south flow, aren't you attenuating the Schultz Curve?

Response: measurements are the sum of all noise throughout one day. The total number of days are added and that sum is divided by 365, which yields the annual average.

6. How can comments be communicated? Response: through a variety of means: via the website, contacting the consultants by phone or e-mail, or contacting the Port

7. How are the locations of data points determined? Is it based on measured noise? Dunholter: Representative locations are not noise measurement locations but sample locations to present the modeled noise levels. These locations were picked based on existing flight tracks and how these tracks may be altered. Measurements were used to validate the model. Claire Barrett: The purpose of the proposed methodology is to evaluate the effects of changing flight tracks, not to measure existing noise levels. That work has already been done.

8. Why hasn't there been more discussion of the dispersal of flight tracks? Suzanne Alexander: Possibilities are bounded by safety and time delays.

Question: Is it possible to be more equitable in the distribution of overflights and assign a limited percentage to different neighborhoods, say 20% here, 20% there, etc.?

Alexander: No, it is not possible to assign every other north flow departure to a particular neighborhood. Distributions and dispersals are based on an aircraft's destination and other characteristics, including altitude.

Wouldn't an altitude-based system of dispersal necessarily lead to lumping together of flights over certain neighborhoods?

9. Frank Bozl, Leschi: Concern about South flow arrivals into Sea-Tac. Elected officials and community representatives should be at least acknowledged even if there is not enough time for everyone to speak.

10. Perhaps one indication of annoyance that is more descriptive than the Schultz Curve would be to look at all the people who are in attendance at this meeting.

11. Is FMS currently in use?

Response: In some aircraft and on some procedures, but not all.

12. The issue of flight frequency and the interval between aircraft is important. SEL annoyance is one thing, but cumulative annoyance is another. Greater frequency translates to higher annoyance. North and south flows must be integrated.

13. Mr. Friedman, Medina resident: The change in noise levels is creeping in. Rather than "highly annoyed", he would like to consider himself as "profoundly pissed."

14. Dr. Sheetz: There are limitations on data and science. We need to be more conscious of human factors in measuring annoyance. What happened to commercial aircraft during the practice sessions and performances by the Blue Angels?

Suzanne Alexander: Boeing Field was closed, commercial aircraft departing Sea-Tac were instructed to make early turns (which would not normally be possible during Boeing Field operations).

15. Brian Kenz, Mercer Island resident: What about FMS and the use of Elliott Bay?

Dunholter: FMS has been installed into some but not all planes taking off over Elliott Bay. The flight tracks are more accurate (show less dispersal) than with non-FMS-equipped aircraft.

16. Children must be taken into account in measurements of annoyance. My two-year-old is profoundly disturbed by aircraft noise. She does not nap well in north flow days.

17. (Resident of Magnolia): Narrow focus FMS will increase accuracy. Concern about total traffic over Elliott Bay. KCIA must be factored in, as well as Renton Field. Is there an altitude noise curve below 1500/2000 ft.? What about absorption by water? Is the study more heavily weighted for outdoor vs. indoor noise? Does this factor in the 3rd runway?

Dunholter: The study period is 5 years. Water is a more reflective surface than the ground. The ground absorbs more sound than water. No inside noise measurements have been made, all have been outdoors.

18. Regarding the population density maps, which census is this data based on? The Puget Sound region is growing at a very fast rate. Somerset Hill is at an altitude of 1000 feet and includes three schools. Why not measure for a full 365 days instead of only 30? What about bad weather? There has been damage to green belts from aircraft noise. Float planes taking off from Renton should be factored into the model. Why can't all aircraft turn as soon as possible? What about aircraft turning East before turning South?

19. Could we have a show of hands for those in the audience who are extremely annoyed? [near-unanimous show of hands].

20. Bill Hanson, Madrona Community Council: There will be a meeting of Madrona residents on Sept. 28 at Madrona Elementary School to discuss aircraft noise. At this meeting, the community will assess its resources and where we want to go from here.

21. What exactly happened during the Blue Angels' practice and performance?

S. Alexander: We basically 'sterilized' a cylinder 5 miles in diameter and 15,000 feet high. Commercial aircraft turned as soon as possible to avoid this cylinder and flew over other communities. This was only possible due to the closure of Boeing Field during the performances. This did cause delays for the duration of the Blue Angels' practice and performance. If this practice were allowed to happen on a regular basis, delays would increase exponentially. Regular noise policies were not followed during the performances.

Question: Were there delays for the rest of the day following the Blue Angels?

Alexander: Yes.

22. How could we be violating other communities' noise policies? Where are these 'covenants' we're talking about? It seems that certain communities are being required to take all the noise, while other communities seem to be off the hook.

23. Air traffic is growing along with population in the region. What about the forecasts of operations and fleet mix? How does current actual data compare to forecasts?

Response: Actual data has tended to show a higher number of operations than forecast.

Question: By what percent?

Response: I'm not sure.

24. At what point does a community deserve relief from aircraft noise?

Guy Spencer: People should communicate with their elected representatives.

Dr. Rudolph: If we look at the history of the East turn [on northbound departures], we notice a substantial growth from 120 operations in 1987 to 210-220 operations currently. There has never been any agreement that aircraft would fly over Leschi, Madrona, Medina, etc.

Meeting adjourned at 8:30.

Addendum: Article from the August issue of *Governing Magazine* on Fly Quiet Programs.

**Sea-Tac Part 150 Study  
Operations Subcommittee Meeting  
October 6, 1999  
Minutes**

***Attendees:***

**Committee Members:** Duane Anderson, Mike Rees, Guy Spencer, Jules Bloomenthal, Lloyd Docter, Richard Kennedy, Arden Forrey

**FAA and Air Traffic Control:** Suzanne Alexander, Cayla Morgan, Tom Roach

**Port of Seattle Staff:** Ron Seymour, Bob Wells, Sarah Dalton

**Consultant Team:** Ryk Dunkelberg, Mary Vigilante

Members of the public.

***Handouts:*** Agenda

R. Seymour opened the meeting and stated that the purpose of the meeting was to clarify and refine the flight track alternatives that the subcommittee has asked the team to evaluate. This clarification is the result of discussions with the FAA Air Traffic Control Tower. R. Seymour reminded meeting participants that the purpose of the meeting was to pass along information, and that while questions would be welcomed, it was not anticipated that additional new alternatives would be put forth or considered. M. Vigilante added that the committee's guidance would be solicited as to how to proceed as to which alternatives to model.

R. Seymour then stated that the variations are an attempt to still meet the objectives of the subcommittee within the confines of the air space system. R. Seymour also stated that the Port and Consultants have met with the FAA and discussed the Elliott Bay departure procedure to see if more aircraft could be added to the corridor. The FAA stated that due to airspace conflicts in the Los Angeles area, no additional planes could be routed to the west through Elliott Bay without having to reconfigure the entire airspace from Seattle to Los Angeles. R. Seymour stated that the Port would write letters to the FAA requesting that at an appropriate time consideration be given to reevaluating the airspace to



accommodate additional departures through Elliott Bay. R. Seymour also stated that Seattle noise abatement concerns were a low priority in the West Coast air traffic system and that procedures for aircraft in the Los Angeles Area basin would take priority. R. Seymour turned the meeting over to M. Vigilante who asked the group for guidance on the air traffic variations. M. Vigilante explained that there were two alternatives to address: the north flow scatter alternative and the south flow alternative.

M. Vigilante started with the south flow alternative and explained that air traffic control has indicated that they could not implement a departure that followed the Green River Valley exactly but could institute a departure heading of 145 degrees. If the objective is to put as many operations as possible over the Kent Valley, then the only way for FAA to implement such an objective is to use a straight-out departure on a 145 radial for some of the traffic. This would be used for eastern destination traffic only. R. Seymour explained that because of Boeing Field departures on the 130-degree radial, and prop departures from SeaTac on a parallel 130-degree radial, separation for safety and efficiency permitted only the use of the 145-degree radial. An altitude-based turn likewise is not possible due to safety conditions concerning traffic volumes and types. G. Spencer asked if another navigation aid could be implemented and if so, whether it would help. S. Alexander replied that she did not think that would help much, due to the nature of the traffic. She also stated that it was not a question of workload or people, but rather the safe separation of aircraft and the volume of air traffic. Additional air traffic controllers would not help. A committee member asked whether one departure procedure might be to depart on the 145-degree radial until the aircraft intercepted another radial. S. Alexander answered that that was possible. Committee members were reminded that the objective was to reduce the number of people affected by noise.

M. Vigilante stated that any turn in flight tracks would pull the contour back toward the Airport. She then asked whether it might be possible to put some of the traffic on the 145-degree radial since not all traffic could be routed along the Kent Valley. M. Rees asked what percentage of traffic could be put on the 145 radial. T. Roach stated that about 65% of the traffic is south- and eastbound. L. Docter asked that one departure on the 145-degree radial be examined along with another departure with a new NAVAID to make another turn. S. Alexander answered that we should model the 145-degree radial departure, and that the FAA would do an additional analysis of a curve in the departure with a NAVAID. L. Docter asked whether a NAVAID was possible in the Kent Valley. S. Alexander said that it was. S. Dalton stated that the Port would look into the possibility of a NAVAID.

D. Anderson mentioned that earlier turns would affect residents who live closer to the Airport and could make their noise levels higher. R. Kennedy asked at what point air traffic would get on the 145 radial. S. Alexander stated that jets could go out a 145-degree radial because props are sent out a 130-degree radial and there needs to be at least a 15-degree separation between the two tracks. To have aircraft fly down Kent Valley, G. Spencer asked how much a VORTAC would cost. M. Vigilante replied that the equipment alone would cost approximately \$1.5 million. The cost of acquiring property for the equipment would also need to be calculated, thus the total cost cannot be estimated. G. Spencer reiterated that reducing impacts to people was the goal, and that dispersion is a means to an end of reducing impacts. L. Docter stated that the reason for dispersal was to relieve the effects of aircraft noise on neighborhoods that are currently severely impacted, and that to this end we all need to share the noise and accept our share of the burden. G. Spencer said that the population data needed to be examined to determine which procedures would affect the fewest numbers of people.

M. Vigilante then presented the north flow, east turn, variation. It was stated that it is the understanding of the consultant team that the committee objective was to spread the noise. This was presented to Air Traffic Control (ATC) to determine, from an operational perspective, what procedures could be used to accomplish this objective. S. Alexander stated that air traffic control could address this objective by implementing a split turn procedure, using the Mountain and Suma tracks. The Suma track (for aircraft heading south and southeast of Seattle) would commence a turn to the east over Boeing Field, approximately 4 to 5 miles north of Sea-Tac. Aircraft on the Mountain Procedure, aircraft heading to the east and northeast of Seattle, would commence their turns approximately 4 miles north of the Summa turn. S. Alexander and T. Roach explained that they need approximately four to five mile separation between two distinct departure tracks to safely accommodate differences in aircraft types and speeds. They stated that the Mountain turn would be at approximately nine miles from Sea-Tac. In addition, T. Roach explained that arrivals from the northeast have to be considered, and these could interfere with certain northbound departures if the Mountain turn was too far north. Arrivals also have to be considered when looking at altitude separation to the east of the Airport. S. Alexander stated that complete dispersion was not possible and that split tracks were the best that air traffic control could implement.

M. Rees asked whether flight tracks could be divided into percentages that turn on different tracks (25% of departures following one track, 25% following another

track, etc.) S. Alexander stated this was not possible due to traffic volume, destinations, and efficiency. She added that the FAA would not implement any procedure that resulted in a negative impact on capacity or efficiency. This was national policy. J. Bloomenthal stated that the farther north the turn, the more the communities farther north would be impacted because they also experience arrival noise and this should be considered. He then asked whether the entire straight-out departure track and turns could be tilted to take better advantage of the water. S. Alexander stated that this could be considered if it is determined that the split departure is a recommendation. L. Docter asked if the Elliott Bay departure capacity was exhausted and S. Alexander stated moving aircraft from the west to the east created operational conflicts more so than capacity issues. T. Roach stated that because of the four-post system, the mix of turboprop and turbojet aircraft (which approach at different altitudes), and because of potential interference with flightpaths of aircraft arriving from the northwest, sending more departures out over Elliott Bay would also compromise safety. L. Docter then stated that we can't micro-manage the air traffic system and we should model what the tower says they can implement. He asked if there could be a special "high performance aircraft departure procedure"? S. Alexander stated that the FAA would take a look at it.

G. Spencer asked whether the FAA or the Port had considered congestion pricing in air transportation as a way of reducing the high volume of traffic at peak or "push" times. M. Vigilante replied that recent legal opinions had found congestion pricing to be discriminatory, and that provisions of the Airport Noise and Compatibility Act (ANCA) prohibited such practices. R. Dunkelberg added that ANCA specifically prohibits anything that indirectly regulates traffic based on noise. J. Bloomenthal then stated that we should remember to look at cumulative impacts, especially on the north split.

R. Seymour commented that due to statements made by the FAA that sending more departing traffic out over Elliott Bay would be highly problematic, it would be unlikely that the consultant team would proceed with modeling that proposal. However, R. Seymour reminded the committee that the Port would send letters asking them to consider allowing that possibility. He said he doubted that a response from the FAA could arrive before the next meeting on Nov. 17. A. Forrey stated that he thought P. Dunholter said that there were three departure routes to the east. It was stated that his analysis was made prior to discussions with the air traffic control tower and that following those discussions it was learned that there were in fact only two. An audience member asked where they could get environmental documents and C. Morgan said to contact her directly. An audience member asked if the FAA could disperse the traffic on a weekly

basis, with all traffic on one track for the entire week and then shift to another. T. Roach and S. Alexander stated that this was not possible. In response to a question about changing flight tracks and the relation to the National Environmental Policy Act (NEPA), M. Vigilante stated that while NEPA covered the changes to existing flight tracks, airlines were not bound by NEPA regulations should they decide to add new flights.

**The meeting was adjourned at approximately 8:30 pm.**

**Sea-Tac Part 150 Study  
Operations Subcommittee Meeting  
November 17, 1999  
Minutes**

***Attendees:***

**Committee Members:** Duane Anderson, Mike Rees, Guy Spencer, Jules Bloomenthal, Richard Kennedy, Arden Forrey, Al Furney, Rose Clark, Dick Haferbecker, Mike Rees (for Betty Ivie), Dr. Robert Rudolph, Hank Myers, Clare Impett (for Cynthia Stewart)

**FAA, Air Traffic Control:** Suzanne Alexander, Cayla Morgan

**Port of Seattle Staff:** Ron Seymour, Bob Wells, Lynae Jacobson, Sarah Dalton, Stan Shepherd, and Rob Kikillus

**Consultant Team:** Ryk Dunkelberg, Paul Dunholter, Claire Barrett, Mary Vigilante, and Michael West.

Members of the public.

***Handouts:*** Agenda, "Summary of Flight Alternatives", Glossary of Aviation and Acoustic Terms

Ron Seymour called the meeting to order and welcomed those in attendance. He explained that the purpose of the evening's meeting was to present a summary of flight track alternatives that had been developed by the consultant team in response to requests by the Operations Subcommittee. He explained for those members of the audience who had not previously attended a Part 150 meeting what the Part 150 process entailed and gave a brief description of the Study schedule.

Ron Seymour then turned the meeting over to consultants Ryk Dunkelberg and Claire Barrett, who gave an overview of the presentation. They emphasized that the main purpose of the meeting was to hear the committee and public's reaction to the considerable amount of data presented. For that reason, the meeting format would be a short summary of the findings followed by Committee and public discussion. They also emphasized that the consulting team had been careful to present the data without making recommendations. Recommendations would come from the subcommittees and committees at a future date.

After a brief description of the type of analysis conducted and a definition of noise measurements used (a Glossary of frequently used aviation and

acoustic terms was available as a handout), Ryk Dunkelberg and Claire Barrett then turned the meeting over to Mary Vigilante and Paul Dunholter, who walked the audience through a series of maps and tables showing the projected results of various flight track alternatives.

Mary Vigilante began with a description of south flow departure alternatives (take-offs to the south), pp. 8-11 in the original<sup>1</sup> summary document. In these maps and tables, data was presented describing the probable effects of a two-track south flow and a three-track south flow (figs. III.20.A and III.20.B). Page 9 of the original summary document features tables describing changes in the population affected in south flow in terms of Annual DNL Noise Exposure and a Single-Day South Flow. Contours range from 55 to 75 DNL in increments of 5 DNL.

For the two-track option (in south flow), percent changes in population affected range from an increase of 3% in 55 DNL to a decrease of 11% in 65 DNL. For the three-track option, percentage changes range from a decrease of 7% at 60 DNL to a decrease of 29% at 70 DNL. There was no percentage increase of DNL for the three-track option.

In a single-day, south flow condition, the percentage of residents affected ranged from an increase of 19% in 70 DNL to a decrease of 16% in 65 DNL for the two-track option, and a range from -2 % in 70 DNL to -27% in 65 DNL for the three track option. Again, there was no percentage increase of DNL for the three-track option.

In response to a call for comments from committee members, Guy Spencer stated that he wished to spend more time reviewing the data before taking a position on the options presented. He then made several critical comments about the syntax and data in the summary document tables and expressed a desire to see improved writing in the narrative. He noted the use of the 145-degree radial in the south flow departure options and suggested an adjustment of the radial used by Boeing Field (King County International Airport; henceforth designated as "KCIA") to accommodate the possible change in Sea-Tac departures. Guy Spencer suggested some kind of cost-benefit analysis to determine the effect of such a change. Guy Spencer also suggested that this analysis should not necessarily consider delays and inefficiencies as a hindrance for evaluating alternatives. Ron Seymour reminded Guy Spencer and other committee members that any flight track recommendations resulting in increased delays at Sea-Tac Airport would not be considered by the FAA. Suzanne Alexander agreed with this statement and indicated that this message was handed down from the White House to the FAA.

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<sup>1</sup> An updated version of the summary document has been prepared and is available on the web at [airportnetwork.com/SEA/](http://airportnetwork.com/SEA/) under What's New. This document will also be distributed to Committee members.

Richard Kennedy (Citizens' Advisory Committee member) was pleased to see multiple alternatives but wondered which, if any, might trigger environmental review. He also questioned why increases in the number of operations and the resulting environmental impact did not also require a formal environmental review. Ryk Dunkelberg noted that changes in flight tracks – that is moving the path where aircraft fly - typically require environmental review, but increasing flights on existing tracks does not.

Rose Clark (CAC member) expressed an initial preference for the three-track option and wanted to know specifically how much noise would be reduced in the Des Moines and Burien areas. Given the proximity of KCIA to Sea-Tac, she stressed the importance of coordinating actions between KCIA and Sea-Tac Airport. Cayla Morgan (FAA) noted that KCIA operations were outside the scope of the Sea-Tac Part 150 but that the recently begun Part 150 Study for KCIA did recommend coordination with Sea-Tac. S. Alexander (FAA) stated that the FAA would consider all airports in the area (Sea-Tac, KCIA, Renton Field, etc.) and no airport in isolation.

Al Furney (CAC member) expressed thanks to the consultant team and noted that this was the first time in his memory that comparative data using several noise metrics for each alternative had been presented. He expressed a desire to see data for the Elliott Bay/Duwamish Corridor flight track, as well as the implications for Noise Abatement Departure Profiles (NADPs) on the various flight track alternatives. He also suggested that given the volume of data generated by the committee's request, members would need some time to examine and digest the different alternatives.

Richard Kennedy asked why KCIA was on a 145-degree radial. Ron Seymour explained that the radial was actually 130 degrees, or runway heading at KCIA. At Sea-Tac, propeller-driven aircraft typically also follow the 130-degree radial, while jets follow a 145-degree radial for adequate separation.

Dr. Robert Rudolph noted that fellow CAC member Lloyd Docter was unable to attend the meeting but had expressed a preference for the three-track option.

Mary Vigilante then turned to options for north-flow operations (take-offs to the north) and the issue of increasing the number of aircraft using the Elliott Bay/Duwamish Corridor. She noted that multiple FAA regions would need to be coordinated to consider handling increased traffic in this corridor, because of the need to cross aircraft in the airspace around Oregon. The ultimate destination of most of these aircraft would be the Los Angeles area basin.

Ron Seymour stated that while this process would take time, the Port would draft a letter to the various FAA regions apprising them of the community's desire to see an increase in use of this corridor and requesting a coordinated action to solve the crossing aircraft problem. He noted that the time involved in the formulation of a coordinated response would most likely extend beyond the deadline of the present Part 150 study, currently scheduled to end in April 2000. Dr. Robert Rudolph stated that a major push would be necessary to coordinate action by the different FAA regions.

Mike Rees stated that increasing the use of Elliott Bay was a good idea as long as it included FMS to insure that aircraft stay in the middle of the Sound and don't stray towards the shore. This is especially true for the KITSAP departure procedure during the nighttime.

Erik Tweit, City of Seattle, stated that he thought a letter from the Port to the FAA favoring an increase in operations out Elliott Bay was a good idea, but he encouraged the Port to supplement it with an aggressive effort to secure action. Dr. Robert Rudolph seconded Tweit's comment.

Clare Impett noted that KCIA was concerned with the Elliott Bay/Duwamish flight track, because of possible impacts on operations at Boeing Field.

Al Furney suggested that eventual recommendations be integrated into the national air traffic control system and wondered whether they could be adopted as part of the national "free flight" policy. Hank Myers (CAC) also expressed interest in free flight. Paul Dunholter (consultant team) stated that he believed that adoption of free flight would not occur for several years. Suzanne Alexander (FAA) noted that while adoption of free flight was still many years out, the timing was favorable to include any recommendations while the policy was still being formulated .

Suzanne Alexander also noted that Alaska Airlines has been one of the pioneers in the development of free flight policies because of the airline's relatively advanced avionics, but that many other airlines were considerably "behind the curve" relative to Alaska. Adoption of free flight cannot happen until all airlines are at the same technological level, which is still many years away.

Mary Vigilante then turned to east turns under north flow (pp. 3-6 in the original summary handout). She presented two alternatives: one showing the split east turn (tracks III-18A) and the second with the use of Flight Management System (FMS) (tracks III-18B). In terms of annual DNL exposure, track III-18A showed a decrease in population affected of 1% in



60 DNL, while there was no change for track III-18B using Flight Management Systems (FMS).

For a single day under north flow conditions, track III-18A, the split east turn, showed an increase in population affected of 8% in 55 DNL, and a decrease of 2% in 60 DNL. The FMS alternative, track III-18B, showed a decrease of 2% in 55 DNL. All other DNL levels showed no change.

Pages 5 and 6 of the original summary document describe the predicted effects of the different tracks on speech and sleep interference. Speech interference is evaluated using the annual Time Above 65 dBA, expressed in minutes. Changes for the split turn (Track III-18A) ranged from an increase of 2% in Time Above 10 minutes daily to a decrease of 6% in Time Above 60 minutes. Under FMS (track III-18B), there was a decrease of 1% in Time Above 10 minutes. No other increases or decreases were registered under FMS.

For a single day under north flow conditions, changes ranged from an increase of 23% in Time Above 10 minutes under the split east turn, track III-18A (the table erroneously lists the increase as 9%; Paul Dunholter brought this to the attention of the audience) to a decrease of 13% for Time Above 60 minutes. Under FMS (track III-18B), changes ranged from a decrease of 0.2% in Time Above 30 minutes to a decrease of 3% in Time Above 10 minutes.

For potential sleep awakenings, the Sound Exposure Level (SEL metric) was used, because it is the noisiest event that is likely to disturb sleep. The split east turn (track III-18A) resulted in an increase of 48% for 90 to 95 SEL range, and an increase of 36% for 85 to 90 SEL range. Under FMS, changes ranged from a decrease of 4% at 90 to 95 SEL to a decrease of 17% in the 85 to 90 SEL range. (This was erroneously presented as 39% in the original summary document.)

Guy Spencer (CAC) asked what noise reduction was assumed with windows open and closed. Paul Dunholter responded that the assumption was a reduction of 15dB with windows open and 25dB with windows closed. Ron Seymour noted for the audience that decibels (dBs) are expressed logarithmically.

Jules Bloomenthal pointed out the significant reduction in TA thirty minutes achieved by the split east turn.

Duane Anderson (CAC) noted that the split east turn (track III-18A) would require aircraft to turn east sooner, meaning that they would be at a lower altitude and thus noise under that flight track would increase. Duane Anderson wanted to know if the lower altitudes were taken into account in

the analysis. Paul Dunholter said that the lower altitudes were taken into account in the analysis.

Mike Rees complimented the information presented saying that it represented a change in the way communities receive information on noise. He also requested that locations on maps be identified by place name such as Mercer Island, rather than by number.

Arden Forrey asked whether population density rather than population should be expressed. Dunholter stated that population data came from a 1998 study produced by the Puget Sound Regional Council and was the most up-to-date information available.

Paul Dunholter then presented a graph describing recent studies in sleep disturbance (the Shultz Curve). Data in the graph showed results of three studies:

1. The Federal Interagency Committee on Noise (FICON) Study of 1992,
2. The Federal Interagency Committee Against Noise (FICAN) Study of 1997, and
3. Field studies conducted in England and at Denver International Airport

A number of committee members doubted the accuracy of the data. Paul Dunholter replied that the results were on file with the respective Federal agencies and that the data were generally accepted as valid in the profession. Ron Seymour invited comments from Bob Brown, an acoustic consultant invited by the CAC to serve as a "second set of eyes" for noise data.

Bob Brown said the data was accepted internationally, but more importantly whatever its absolute accuracy, the data was certainly valid to use for evaluating the relative merits of alternatives under consideration. He saw no reason to challenge it.

Turning to Flight Management Systems (FMS) and flight tracks, Mike Rees noted that even under FMS procedures there still appeared to be a number of deviations from the recommended flight track. Suzanne Alexander stated that because not all aircraft are equipped with FMS, it is not possible for FMS-equipped aircraft to adhere to the recommended flight track 100% of the time. An aircraft that is not equipped with FMS may deviate temporarily from the recommended flight track and thus fall behind on its intended route. In this case, the FMS-equipped aircraft may be taken off the recommended flight track in order to insure safe separation from the aircraft ahead. Suzanne Alexander pointed out that safety concerns will always take precedence over the continuous adherence to flight tracks.

Guy Spencer suggested that the word "daily" be added to the title of Table VIII-A1, "Number of Overflights."

Dr. Robert Rudolph initiated discussion of a handout that he had prepared circulated among committee members, "An Analysis of the Port of Seattle Noise Compatibility Study Consultant's Report Regarding Impacts of a Split vs. the Current Single East Turn Procedure."

Duane Anderson noted that Rudolph's analysis did not mention any of the points where noise would increase under the split east turn. He emphasized that these points also merited consideration.

Ron Seymour asked committee members whether they needed more time to review the document, and committee members answered yes. **It was agreed that comments on the document be sent to Ryk Dunkelberg by Monday, Dec. 6.**

The meeting was then opened to comments from the general public in attendance. Public Comments and Suggestions:

More specific point data for neighborhoods, which would be newly affected, should be included.

More effort should be put into the possibility of increasing the capacity of the Elliott Bay/Duwamish Corridor for takeoffs.

A representative of the Medina City Council read a resolution passed by the Council calling for relief from jet noise.

Environmental concerns, particularly the effects of aircraft noise on wildlife, need to be addressed. Seward Park, Pioneer Park (Mercer Island) and Discovery Park are all home to bald eagles. Because parks are not inhabited by humans, population figures can be misleading. The parks are still frequented by considerable numbers of citizens, thus aircraft noise will still have an effect on people even though they don't live there.

There should be more representation of the Eastside on the CAC and TAC.

A member of the audience asked for a justification from the FAA for the refusal to consider alternatives that increased delays. Suzanne Alexander stated that the directive came from the White House, and that citizens should write their appropriate congressional delegation to express their views.

A number of pleas for equitable noise distribution and continued cooperation among neighborhoods were made.

The City of Medina recorded its support for the split east turn.

When questioned further about the sleep interference data, Paul Dunholter noted that human beings are able to distinguish the noise of a jet aircraft from the sound of a baby crying or the sound of a key in the front door lock. Thus, sometimes relatively quiet noises wake us, while relatively loud ones do not. Clearly different people react differently, and those most sensitive to aircraft noise are the ones represented here.

A citizen from Mercer Island expressed a desire for more data points in areas that would experience an increase in noise from the split east turn. Several residents of Mercer Island expressed opposition to the split east turn.

Citizens from Leschi and Madrona expressed a desire for equitable sharing of noise.

Several members of the public expressed strong support for sending more aircraft west out the Duwamish/Elliott Bay rather than east over their communities.

A resident of Beacon Hill reminded people that Sea-Tac operates in south flow about 65% of the time. This means that arrivals pass over Beacon Hill far more than departures pass over the eastern communities.

A resident of Leschi expressed the desire for a rotation of headings, so that no one community experiences overflights all the time.

The meeting adjourned at 9:30 pm.

**Sea-Tac International Airport FAR Part 150 Study Update  
Operations Subcommittee Meeting  
Wednesday Feb. 9, 2000  
6:00 p.m., Large Auditorium**

**Attendees**

**Subcommittee members:**

Duane Anderson (King County District #5)  
Mike Anderson (King County District #8)  
Rose Clark (City of Burien)  
James Combs (City of Seattle)  
Lloyd Docter (City of Federal Way)  
Betty Ivie (King County District #4)  
Richard Kennedy (City of Des Moines)  
Connie Marshall (King County District #12)  
Mike Ranta (King County District #10)  
Dr. Robert Rudolph (King County District #6)  
Cynthia Stewart (King County International Airport [Boeing Field])

**Citizens' Advisory Committee members:**

Doug Hakala (King County District #3)

**Technical Advisory Committee members:**

Billy J. Self, Southwest Airlines

**Port Staff:** Bob Wells, Ron Seymour, Stephanie Shadle, Lynae Jacobson, Stan Shepherd, Rob Kikillus, Marsha Holbrook

**Consultant Team:** Claire Barrett, Paul Dunholter, Ryk Dunkelberg, Mary Vigilante, Michael West

**Members of the public (over 350)**

**Handouts:** Agenda, Letter from Gina Marie Lindsay, Director, Aviation Division, Sea-Tac International Airport, to Dan Boyle, Federal Aviation Administration, Glossary of Commonly used Acoustic and Air Traffic Control Terms, Generalized Study Schedule, Generalized Flight Track Implementation Process (diagram)

Ron Seymour welcomed committee members and the members of the public to the Operations Subcommittee meeting of the Sea-Tac Airport Part 150 study. He explained that the topic of the evening's meeting was flight track issues. The meeting would be divided into one hour of subcommittee discussion, followed by an hour of public comment, ending with an hour of committee deliberations and recommendations that will be carried forward to the full

Citizens' Advisory and Technical Advisory Committees at their next meeting. Together, the CAC and TAC will make recommendations to Port staff, who will then make recommendations to the Port Commission in August. The FAA will have a 180-day review period to evaluate the Part 150 study. If flight track recommendations are made by the Port Commission and those recommendations are sustained through the FAA review, a NEPA (National Environmental Protection Act) environmental review will be generated, which will in turn likely trigger a full Environmental Impact Statement. An Environmental Assessment or Environmental Impact Statement typically takes 12 to 18 months, after which time air traffic controllers would need an additional 9 to 12 months to develop and test the recommended revised procedures.

R. Seymour noted the large number of people in the audience and explained that while a larger auditorium had originally been scheduled for this meeting, recent events involving Alaska Airlines had unexpectedly changed plans. He noted that the airline was conducting counseling sessions next door and asked the audience to please be respectful of those next door.

R. Seymour explained that discussion of flight tracks would center on three areas: south flow departures, north flow departures including the east turn, and use of the Duwamish/Elliott Bay Corridor. He asked committee members and the public to limit their comments to the particular topic under discussion. He noted that there are other opportunities for public comment at future meetings and especially at the public hearing scheduled for July.

He noted that a substantial amount of data has been collected, analyzed and presented to the various committees and subcommittees throughout this Part 150 Study, which is the largest study of its kind to date in the country. The public can see the results of the study to date by visiting the Part 150 website at [www.airportnetwork.com/sea](http://www.airportnetwork.com/sea). Those people who do not have access to the Internet will soon be able to consult study results at nearby libraries. Copies of working documents are currently available at Kinko's locations near the airport (South Center Mall) and in downtown Seattle (at the Second Avenue and University Avenue location). He then turned the meeting over to the consultant team.

Claire Barrett reminded subcommittee members and the audience that for the sake of clarity, the discussion would be organized to consider south flow departures first, then use of the Duwamish/Elliott Bay Corridor, and finally north flow departures and possible changes to the east turn. C. Barrett asked how many committee members wished to discuss the various issues, in order to give an indication as to how best divide the first hour of committee discussion. Approximately one-third of the committee wished to discuss south flow tracks.

#### **South Flow Discussion:**

Richard Kennedy, representing the City of Des Moines, noted his community's opposition to the proposed three-track south flow departure, saying that it was not apparent that many more people benefited from the proposal. The City of Des Moines was in favor of pursuing a two-track option pursuing the Green River/Kent Valley Corridor.

Mike Anderson, representing King County District #8, felt that there was generally too much

air traffic over the south end of Vashon Island and over the south end in general. Representatives from his district considered the two-track option generally viable, but thought that the three-track option would only send more noise over heavily populated areas south of the airport.

Lloyd Docter, representing the City of Federal Way, suggested modifying the three-track option so that departures on the west track turn at 1 to 2 DME from the Airport. He suggested that data be sorted according to eastern and western departures and encouraged strategies that would direct flight tracks over water. He found the 145-degree radial too modest and suggested instead a 135-140 degree radial. He also suggested more departures to the southeast

Al Furney, representing King County District #13, said that the two-track option was preferred to the three-track option.

Rose Clark, representing the City of Burien, said that her community would support use of the Green River corridor but would not support turns to the west.

C. Barrett then asked for comments regarding use of the Duwamish/Elliott Bay Corridor.

#### **Duwamish Corridor Discussion:**

Doug Hakala, representing King County District #3, noted for members of the public that committee members were appointed by elected officials but were not themselves elected officials. He stated that it appeared that airport capacity, traffic, and noise would all increase in the future. He noted the Port's existing efforts to mitigate noise including the extra work included in this study, and the soundproofing of homes close to the Airport.

D. Hakala felt that the increased use of the Duwamish/Elliott Bay Corridor is an obvious mitigation measure, along with increased use of flight tracks over industrial areas. He noted the complexity of the problem, but was encouraged by the recent letter by Aviation Director Gina Marie Lindsey to the Federal Aviation Administration.

Betty Ivie, representing King County District #4, noted that the Duwamish/Elliott Bay Corridor had a limited capacity and stressed the importance of the use of Flight Management Systems (FMS). She emphasized the overlapping effects of the different airports in the vicinity (Boeing Field, Renton Field, and Sea-Tac) and the use of different aircraft, including helicopters and float planes throughout the region. She noted the sharing of the same airspace by multiple airport operators and stressed the importance of using public money wisely in determining a solution to the problem.

Bob Rudolph, representing King County District #6, agreed that using the Duwamish/Elliott Bay Corridor was a "win-win" situation. B. Rudolph stressed the need for a better understanding of the problems with using this airspace.

M. Anderson noted that there were 1,000 miles between Seattle and Los Angeles, and there should be room to cross aircraft in that amount of space.

Arden Forrey, representing King County District #2, made a statement in favor of more data in order to properly understand this issue.

Hank Myers, representing King County District #11, agreed that more information on the Duwamish/Elliott Bay Corridor capacity was necessary. He felt that a free exchange was needed in order to change thinking.

L. Docter disagreed that more data was the problem. More and more information without results is not useful, he said, and suggested instead that people should find areas of consensus and work towards achieving them. Using the Duwamish/Elliott Bay Corridor more was one of those consensus items.

Guy Spencer, representing the City of Normandy Park, did feel that more information was required, specifically on the FAA directive covering capacity.

Mike Ranta, representing King County District #10, spoke strongly in favor of using the Duwamish/Elliott Bay Corridor for more traffic.

A. Furney suggested that although the Duwamish/Elliott Bay Corridor is an established noise abatement corridor, and therefore desirable, the lack of information about how many more flights could use it was limiting the Subcommittee's ability to compare this idea with other alternatives. That difficulty, he felt, is leading to frustration.

B. Rudolph questioned the timing of the Port of Seattle's letter to the FAA on the Duwamish/Elliott Bay Corridor and wished to know when a response might be expected.

R. Seymour responded that the Port had given considerable thought on the most viable way to approach this issue. There are many issues with airspace along the west coast of the United States and the Port feels that it is best to lay a foundation for the concerns prior to officially asking for a change. The Port knows that this is a difficult and complex issue and that this approach at least gives the possibility of obtaining a yes from the FAA. Much work has been done on this issue through conversations, phone calls, etc. to advise everyone that this is a large concern for the citizens of the Seattle area and that a request will be forthcoming to address this issue. The letter, referenced earlier, asks for the FAA to set up a Task Force to look at this issue and be as creative as possible to find a solution.

A. Forrey reiterated his belief in the need for more data, specifically data on flight destinations and times, as one way of determining the capacity of the Duwamish/Elliott Bay corridor.

C. Barrett noted the time and asked committee members to move to a discussion of North Flow alternatives.



## North Flow Discussion

M. Ranta stated that everyone who lived north of Interstate 90 would benefit from the split turn proposal. He said that the scatter test conducted in 1987 was not the same thing as a split track and thus was not comparable to the proposal under discussion. He noted the altitude at which aircraft would make the proposed split turn— between 4800 and 6000 feet – and asked Paul Dunholter whether aircraft noise at 4800 feet would be distinguishable from aircraft noise at 6000. P. Dunholter replied that a difference of 1200 feet would result in a noise differential of 2dB, which would be barely distinguishable. M. Ranta then questioned the semantic difference between “shifting” and “sharing” noise and wondered what distinguished one from the other.

Connie Marshall, representing King County District #12, noted that the Part 150 study was a voluntary study willingly undertaken by the Port. She stated that as she understood it, the purpose of the study was to address noise issues, prepare forecasts, and reduce land use compatibility conflicts. She also noted that consensus was not required among study participants and reinforced R. Seymour’s comment that Sea-Tac Airport’s Part 150 study goes well beyond the boundaries of any other Part 150 study in the country. She referred to previous Part 150 studies in 1976, 1985, and 1993 and noted that the current study was “overdue.” She added that according to her understanding, no modification of flight tracks was required by the Study. She noted that current flight tracks had been in use for 15 years and that many homebuyers in the region had made home purchases with this understanding of flight tracks.

H. Myers said that he was primarily concerned with the number of flights, their time and destination.

Duane Anderson, representing King County District #5, acknowledged the complexity of adding flights to the Duwamish/Elliott Bay Corridor and remarked that he had discussed the problem on several occasions with Suzanne Alexander of FAA. However, he wondered whether the lack of investigation of the Duwamish/Elliott Bay Corridor was not linked to some kind of protection of that corridor for future use, specifically future capacity expansion. He also questioned the extent to which “tunnelling” was practiced at Sea-Tac whereby departing aircraft were kept at lower altitudes while descending arriving aircraft passed overhead. D. Anderson felt that there was not enough data to determine whether these scenarios were in fact the case.

B. Rudolph stated that according to his calculations, the split east turn would reduce the 75 SEL by 50% in a majority of communities. He calculated an overall decrease in noise at 28 different points. He further noted that 14 of the 17 most heavily populated areas showed a decrease in overall noise, and that nine areas showed a decrease of 50%. He again advocated adoption of the split east turn.

D. Anderson took issue with B. Rudolph’s calculations. He stated that he did not believe the data supported such conclusions and reiterated that he did not support the split east turn.

The consultant team then closed the first discussion period by subcommittee members. R. Seymour then opened up discussion to the public. Comments are summarized as follows.

**Public Comments:**

The President of the Lakewood-Seward Park Community Club presented a packet of over 400 petitions from residents in that area to R. Seymour opposing the split east turn.

A citizen from southwest Mercer Island noted that air traffic from Renton Field created considerable noise in her area.

Rob McKenna, a King County Council Member, addressed the audience and noted a 1997 letter from the Port Commission asking him to appoint a representative to the Citizens' Advisory Committee. He noted that the 1997 letter stated that part of the Study mission would be to not shift noise from one community to another or to create any new noise. He said that he made one appointment to the CAC with this understanding of the Study mission. He further stated that the current discussion of flight track revisions came as a surprise to him and that this appeared to contradict the stated mission of the Study as outlined in the 1997 letter. He said that had the Study mission stated that flight track revisions were under consideration, he would have appointed additional representatives to the CAC in order to represent the communities of Mercer Island, Newcastle and other communities potentially affected by the split east turn alternative. He stated that King County Council members are willing to work with the Port and citizens to find a solution to the problem of aircraft noise.

Clare Nordquist, a Port of Seattle Commissioner, stated that there was indeed a mission to reduce overall noise in the original formation of the CAC. Mr. Nordquist pointed out that he had previously been a member of the CAC representing the eastside, until stepping down from that capacity once being appointed to be a Port Commissioner.

The President of the Lakewood/Seward Park Community Club stated that meetings such as the present one should be encouraging citizens to work together, and that more encouragement and more cooperation were necessary. He argued against merely shifting noise but encouraged splitting tracks if this could be found to reduce noise. He noted that the proposed split turns would have aircraft turning at a lower altitude, which he felt would create more noise for some. He believed that such shifting of noise was against FAA policy and would harm more people than it helped.

Brian Cairns, Deputy Mayor of Mercer Island, presented copies of a letter addressed to Jack Block (Port Commission), Gina Marie Lindsay (Sea-Tac Airport), Ron Seymour (Sea-Tac Airport) and Lawrence Andriesen (FAA) and members of the Operations Subcommittee from the Mayors of Mercer Island, Renton, and Newcastle as well as the Council President of Renton and the President of the Lakewood-Seward Park Community Club calling for a rejection of the split east turn proposal.

A Madrona resident stated that his 3-year-old and 6-year-old children could not tolerate any more noise.

Another citizen questioned the data presented and stated that all local airports must be included in considerations of alternatives.

Another citizen raised safety concerns and had a question as to whether aircraft that turned as they climbed required more power and thus created more noise than aircraft climbing in level flight.

A citizen questioned the conclusions drawn by Subcommittee member B. Rudolph and argued that according to his calculations seven times more people would experience greater noise under the split track proposal. He found that impact unacceptable.

Another citizen called for greater public involvement and citizen participation.

Several citizens stated that noise levels were "intolerable" or "unacceptable."

Another citizen noted that children were particularly affected by aircraft noise and noted a fundraising event performed by local children last summer that had been drowned out by aircraft noise.

Another citizen cited an outdoor wedding ceremony that had been adversely affected by aircraft noise last summer.

A member of the Columbia City Revitalization Committee stated that the proposed revisions to flight tracks threatened the economic development of the Columbia City/Rainier Valley area and urged that any alternatives that would take aircraft over that area be rejected and that other alternatives be found.

A resident of Seward Park noted that she recently bought a home in that area and was dismayed at the possibility of experiencing aircraft noise.

A resident of the Central District noted the number of schools in the Central District/Rainier Valley areas and said that by his calculations over 12,000 children could be affected by proposed flight track changes. He cited an environmental justice order signed by President Clinton in 1994 and said that flight track revisions would have some bearing on environmental justice.

A resident of the Beacon Hill area suggested that the practices in use at John Wayne Airport in Southern California (SNA) be introduced at Sea-Tac.

A citizen asked what the mission of the Port was if it was not to reduce noise overall. R. Seymour replied that the Port's mission was to reduce noise.

A Columbia City resident said that he believed a 3-degree shift in flight tracks occurred in 1995 without any public notice.

A Clyde Hill resident encouraged the Port of Seattle Commissioners to vigorously solicit the cooperation of FAA authorities in using the Duwamish/Elliott Bay Corridor for departures.

Another citizen encouraged pilots to cut back on throttle during take-off and climb.

A citizen from the Somerset Community said she was unable to support any of the proposed alternatives and supported the status quo. She encouraged any measures that would reduce noise overall. She then cautioned overuse of the Duwamish/Elliott Bay Corridor and noted the presence of two schools at the top of the Somerset area.

A citizen from the Seward Park area noted that the surface of Lake Washington reflected aircraft noise and noted that certain homes facing the lake were subjected to relatively more noise than those facing away from the lake.

One citizen called for use of Paine Field for cargo shipments, as he perceived that many of the noise complaints pertained to cargo flights.

Another citizen suggested a market solution to the noise problem by charging variable fees to airlines based on the amount of noise they make. Following on this someone else suggested that people choose which aircraft to fly according to how quiet they are.

The community of Bellevue registered its support for the status quo flight tracks.

Cayla Morgan, representing the FAA, noted that the FAA could not tell passenger or cargo airlines where to fly their planes any more than other federal agencies could tell other private entities how to conduct business. Interstate commerce regulations prevent certain kinds of direct governmental intervention.

#### **Subcommittee Recommendations:**

At this point, Ryk Dunkelberg turned discussion back to the subcommittee and asked for final discussion. He asked that recommendations be formulated to take forward to the full Citizens' Advisory and Technical Advisory Committees at their next meeting.

During the second subcommittee discussion phase, there was disagreement among members whether it was necessary to collect more data before making any recommendations. Subcommittee members tended to have fairly strong opinions on both sides of the question. Certain members felt entirely unprepared to make any recommendations until more data was available, especially on the capacity of the Duwamish/Elliott Bay corridor and the amount of additional traffic that could be sent through it.

Large maps posted on walls at the front of the auditorium showed flight tracks throughout the western United States. The tracks pass over Air Traffic Control centers in Washington, Oregon, California, Idaho, Arizona and Colorado.

Jim Combs, representing the City of Seattle, endorsed the idea of a Task Force to study the Duwamish/Elliott Bay Corridor issue and requested that it include representatives from the communities.

Billy Self, representing Southwest Airlines, pointed out that not all aircraft are currently equipped with FMS, but that airlines are moving in that direction as quickly as possible.

In answer to the comments about collecting more data before making Subcommittee recommendations, R. Dunkelberg replied that there would be no more data collected, and that the time had come to decide on which recommendations to advance to the full CAC/TAC committees.

The seven different alternatives to be considered by the subcommittee were:

**South Flow –**

1. Status Quo
2. Two Track
3. Three Track

**North Flow –**

4. Status Quo
5. Increased Use of the Duwamish Corridor for flights currently turning east.
6. FMS for East Turn flights
7. Split East Turn

**Subcommittee Recommendations:**

The sense of the Subcommittee was recorded on individual alternatives. The Status Quo alternatives represent procedures that are in use today. The understanding is that without adoption of any of the flight track alternatives, the Status Quo remains in effect.

The Operations Subcommittee's recommendations to be put forward to the full CAC/TAC are as follows:

**South Flow**

**2. Two Track**

The Subcommittee endorsed the concept of the Two Track alternative. Discussion included the comment that a sharper east turn would likely be an improvement over the 145 degree track considered in the alternative. The consensus was that the two track alternative showed sufficient promise for noise reduction that it should be forwarded to the full CAC/TAC.

**3. Three Track**

The Subcommittee did not endorse the Three Track alternative. L. Docter, who argued for adoption, felt that there might be a variant on the west turn, which could be superior to the track under consideration. Specifically he suggested that a west turn commencing at 1 – 2 DME would reduce the population under the track considered in the alternative.

R. Kennedy felt that any west turning track would further impact the City of Des Moines and that there was no track between the Airport and Puget Sound that could avoid residential areas.

## North Flow

### **5. Duwamish Corridor**

There was complete consensus among Subcommittee members that redirecting as many flights as possible from east turn tracks west over the Duwamish/Elliott Bay Corridor was a desirable alternative. B. Ivie emphasized that the use of FMS was important to this procedure in order to keep aircraft precisely on the noise abatement track and away from neighborhoods. There were no dissenters from this position, and the position was recommended to be carried forward to the full CAC/TAC for consideration.

The discussion centered around two points: the difficulty in reconfiguring the regional and/or west coast airspace to allow flights from the east turn to be redirected to use the Duwamish/Elliott Bay Corridor, and the need to quantify the number and nature of flights that might be rerouted. Some Subcommittee members expressed frustration at the inability to assess the noise reduction benefits of increasing use of the Duwamish/Elliott Bay Corridor.

The Port of Seattle's position is that no reliable data can be produced without a specific understanding of the number, type and time of day of flights to be rerouted. This data, which is required in order to run any noise model, will not be available until the FAA has determined if it is possible to redirect flights through Elliott Bay, and if so, how many flights and to which destinations might be feasible.

If FAA agrees to convene a Task Force on increased use of the Duwamish/Elliott Bay Corridor, or take any similar action, it will certainly take several months to answer the questions surrounding this issue. As a result, further refinement of this alternative including producing any technical analysis will extend beyond the close of the Part 150 Study itself.

### **6. FMS on East Turn**

The Subcommittee did not recommend that FMS on the East Turn be carried forward to the CAC/TAC. The consensus was that FMS technology was best applied over industrial and water routes such as the Duwamish/Elliott Bay Corridor, but was not desirable over residential areas. The members felt that FMS concentrated traffic too precisely.

### **7. Split East Turn**

By far the most controversial issue of the meeting and the Part 150 Study has been the debate over a split east turn flight track. This alternative would divide the single eastbound flight track into two tracks.

Proponents argued that this alternative was equitable in that it would reduce the impact on neighborhoods currently under the flight path by sharing overflights with other areas. Opponents argued that the split east turn did nothing to reduce noise, but rather shifted it from one community to another without providing any significant

benefit to anyone.

The discussion around this alternative was extensive and covered all points of view. Finally, the Subcommittee agreed to consider two versions of this alternative: the Split East Turn linked with greater use of the Duwamish/Elliott Bay Corridor, as discussed above, and the Split East Turn as a stand-alone alternative.

**7 – A. Split East Turn Linked to Greater Use of the Duwamish**

The Subcommittee agreed by a show of hands to recommend the split east turn linked to increased use of the Duwamish/Elliott Bay Corridor. This alternative will be forwarded to the full CAC/TAC for consideration. During the considerable discussion of this alternative, several Subcommittee members expressed their view that the concept of a split east turn was worthy of further investigation, but that this was not a vote recommending implementation of a split east turn at this time. Many members felt that without knowing the number and nature of flights that might be diverted from the east turn to the Duwamish/Elliott Bay Corridor, it was not possible to fully understand the impact or potential benefit of the split turn concept.

The vote was as follows:

**In favor (8)**

**Opposed (4)**

Arden Forrey	K.C. #2	Connie Marshall	K.C. # 12
Betty Ivie	K.C. #4	Duane Anderson	K.C. # 5
Bob Rudolph	K.C. #6	Cynthia Stewart	KCIA
Mike Anderson	K.C. #8	James Combs	Seattle
Richard Kennedy	Des Moines		
Rose Clark	Burien		
Mike Ranta	K.C. #10		
Lloyd Docter	Federal Way		

**7 – B. Split East Turn as a Stand-Alone Alternative**

The Subcommittee agreed by a show of hands not to recommend the split east turn as a stand alone alternative. This alternative therefore will not be carried forward to the full CAC/TAC. The Subcommittee did not feel confident that the split east turn would provide sufficient noise abatement potential on its own without the benefit of removing some quantity of flights from the east and sending them west over the Duwamish/Elliott Bay Corridor.

The vote was as follows:

**In favor (3)**

**Opposed (9)**

Arden Forrey K.C. #2	Betty Ivie	K.C. #4
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Operations subcommittee meeting, Wednesday Feb

Mike Ranta  
Bob Rudolph

K.C. #10  
K.C. #6

Mike Anderson  
James Combs  
Richard Kennedy  
Cynthia Stewart  
Duane Anderson  
Rose Clark  
Connie Marshall  
Al Furney

K.C. #8  
Seattle  
Des Moines  
KCIA  
K.C. # 5  
Burien  
K.C. # 12  
K.C. # 13

The meeting adjourned at 9:45 p.m.



**Sea-Tac International Airport FAR Part 150 Study Update  
Operations Subcommittee Meeting  
Thursday, March 9, 2000  
6:00 p.m., Large Auditorium**

**Attendees**

**Subcommittee members:**

Mike Anderson (King County District #8)  
Rose Clark (City of Burien)  
James Combs (City of Seattle)  
Lloyd Docter (City of Federal Way)  
Arden Forrey (King County District #2)  
Dick Haferbecker (Alaska Airlines)  
Clare Impett (King County International Airport [Boeing Field])  
Richard Kennedy (City of Des Moines)  
Connie Marshall (King County District #12)  
Mike Ranta (King County District #10)  
Dr. Robert Rudolph (King County District #6)  
Guy Spencer (City of Normandy Park)  
Eric Tweit (City of Seattle)

**FAA Staff:** Suzanne Alexander, Cayla Morgan

**Port Staff:** Charles Blood, Ron Seymour, Bob Wells, Lynae Jacobson,  
and Stan Shepherd

**Consultant Team:** Ryk Dunkelberg, Paul Dunholter, Mary Vigilante, and  
Michael West

**Members of the public**

**Handouts:** Agenda, "Maintenance Run-ups and Mitigation Alternatives"

**Welcome and Introductions**

R. Seymour welcomed attendees and stated the purpose of the evening's meeting would be to discuss some of the outstanding operational issues such as noise from aircraft maintenance run-ups, noise barriers, departure climb profiles, and approach descent procedure. He said that he hoped to get a sense of committee preferences and recommendations among the various alternatives.

**Maintenance Run-ups**

R. Dunkelberg asked for general comments on the mitigation alternatives as detailed on p. II.6-6 of the handout.

In reference to the subject of proposed fines to airlines violating noise policy recommendations, R. Kennedy stated that he thought the figure of \$100 per occurrence seemed very low. J. Combs concurred, suggesting that fines be made "meaningful" by increasing them to a significant level.

G. Spencer asked whether all run-ups were for maintenance. P. Dunholter replied that theoretically this is the case. He explained that maintenance checks fall into a number of different categories. The simplest checks are "spot" or overnight checks and these are the majority of the run-ups that occur at Sea-Tac. Other, more thorough checks exist, two of which are commonly referred to as "C" or "D" checks. D. Haferbecker clarified P. Dunholter's description of C and D checks, saying that they differ in degrees of thoroughness. C checks take typically 2-3 weeks, while D checks take usually one month

G. Spencer suggested moving maintenance operations elsewhere, either to other airports or to another region such as Moses Lake. D. Haferbecker stated that because Seattle is Alaska Airlines' hub, a large number of maintenance run-ups are performed at Sea-Tac Airport. While some maintenance work is performed at other locations such as Oakland, California or Portland, Oregon, it would be very difficult to transfer equipment, facilities and personnel to other locations. D. Haferbecker pointed out that a relatively small majority of maintenance run-ups occur on weekends. He also stated that additional restrictions on the hours of operation of runups are of great concern to Alaska Airlines.

R. Clark stated that she had heard many maintenance run-ups late at night.

M. Ranta asked whether ANCA (the Airport Noise and Capacity Act passed by Congress in 1990) applied to maintenance run-ups. R. Dunkelberg stated that he believed that it did not.

In response to a question as to where exactly maintenance run-ups occur, R. Seymour stated that they occur at designated locations on the airfield, currently on taxiways. P. Dunholter added that they could not occur in hangars because of safety issues.

It was noted that of the roughly 600 run-ups over the past year, only four resulted in violations.

#### **Ground Run-up Enclosures (GREs), Hush Houses**

A discussion followed of Ground Run-up Enclosures or GREs (p. II.6-7 in the handout, Proposed Action II.7).

L. Docter raised the question of building a "hush house" for maintenance run-ups and then charging airlines to use it.

In response to a question about European practices, P. Dunholter replied that Germany imposed fairly restrictive fines on violators. L. Docter asked whether Schipol Airport in Amsterdam had a GRE. P. Dunholter replied no, and that relative to Sea-Tac Airport, fewer people live near Schipol Airport where they are susceptible to sideline aircraft noise. G. Spencer requested information on European practices and fines.

R. Seymour noted that the majority of aircraft involved in maintenance run-ups are MD80s and 737s.

M. Vigilante noted that until the South Aviation Support Area (SASA) is built, the airport is limited in terms of space where run-ups can be performed. L. Docter suggested that the Port concentrate seeking other locations on the airfield to perform run-ups.

P. Dunholter reminded the audience that weather conditions, especially humidity and overcast skies, had an effect on noise propagation. Because of this, he questioned how effective run-up facilities would be at locations in the Pacific Northwest. A. Forrey stated that he would like to see a list of airports in the Pacific Northwest with hush houses. R. Seymour and M. Vigilante replied that currently the only commercial hush house in operation is at Chicago O'Hare International Airport (ORD). L. Docter asked whether climate conditions in Germany weren't similar to conditions in the Seattle area. P. Dunholter replied that while they were somewhat similar, there have been a number of incidents involving German hush houses where wind conditions have limited the use of the facility. Because of the aerodynamic issues, P. Dunholter stated that for many of these hush houses of older design were used for less than half of the maintenance run-ups.

It was suggested that the words "Construct and utilize" be added to p. II.6-7.

L. Docter proposed that the fine system imposed on airlines should be a fine-per-seat system.

R. Clark stated that she believed there were more than four violations over the last year.

R. Rudolph stated that, from his perspective, Chicago was not comparable to Sea-Tac because relatively fewer people live close to O'Hare.

### **Power Units and Noise Barriers**

At this point, R. Dunkelberg asked the subcommittee to consider the use of noise barriers as a noise mitigation alternative (section II.8 of the handout), specifically p. II.8-10.

L. Docter asked whether the fixed power capability would reduce the reliance on Ground Power Units (GPUs). P. Dunholter replied that Auxiliary Power Units (APUs) in the aircraft themselves generated a considerable amount of noise. An explanation followed on power units at the gates and preconditioned air. Typically, these utilities are installed at each gate. At Sea-Tac, the airlines lease the gates, but own their own loading bridges, which is where the utilities are installed.

Committee members questioned whether airlines didn't lease gates from the Port and whether it might be possible to enforce noise compliance through negotiation of gate leases. C. Blood of the Port replied that most leases are month-to-month and that all leases will expire at the end of next year. He noted that items such as pre-conditioned air and electricity are being incorporated as design elements in current plans for terminal improvements.

In response to a question from L. Docter whether airlines could be required to install pre-conditioned air at their gates, P. Dunholter replied that while most gates have power, relatively few have pre-conditioned air. R. Rudolph asked how much such installations typically cost. P. Dunholter estimated that this cost a few hundred thousand dollars per gate. G. Spencer asked whether new leases could have implementation schedules written into them. C. Blood noted that airlines are typically not expected to occupy the same gates indefinitely. Committee members wondered whether the Port could make improvements unilaterally and then charge airlines for the improvements. C. Impett (King County Airport) requested that improvements be consistent across the airport.

R. Clark noted that diesel power generators were a source of air pollution in addition to noise pollution.

Discussion moved to Recommendation No. 2 regarding noise barriers.

L. Docter asked whether ten feet would be an effective height for the design of noise barriers. He then speculated whether cargo facilities might be designed to incorporate noise barrier techniques. R. Dunkelberg noted that this idea was already presented under Recommendation 3.

### **Close-in, Far Out Procedures**

Discussion then turned to possible changes in close-in and far out departure procedures as potential mitigation alternatives.

R. Seymour noted that each airline is allowed, under FAA rules and regulations, two different departure climb procedures for each model of aircraft across the country.

In a discussion of Figure IV.I.B, R. Kennedy noted that all three procedures occurred over inhabited areas.

P. Dunholter discussed a number of figures in the handouts. L. Docter noted that future operations would involve newer generation aircraft, which have better climb performance and quieter engines.

Discussion turned to Alternative 3 on pp. IV.1-5 of the handout related to close-in and far out procedures related to rates of climb.

M. Ranta asked which procedure uses more fuel. D. Haferbecker stated that far out procedures typically use more fuel than close-in procedures, but he did not know exactly how much more.

Looking at the map, R. Kennedy stated that East-West streets needed to be labeled.

When asked by R. Dunkelberg to come to a recommendation as to which procedure to recommend to the full Citizens' Advisory Committee, the subcommittee vote was as follows:

Close-in:	6	(Kennedy, Docter, Spencer, Tweit, Combs, and Haferbecker)
Far out:	4	(Marshall, Clark, Ranta, Rudolph)
Status quo:	1	(Impett)

### **Glide Slopes**

S. Alexander of the FAA began the discussion of glide slopes and Fly Quiet programs by informing the audience that the FAA will be holding training programs for controllers on vectoring and speed control in order to reduce the current amount of "jockeying" whereby aircraft are maneuvered on approach by instructions to speed up or slow down. She noted that all aircraft must necessarily intercept the glide slope from below and cannot do it from above.

M. Ranta noted that bad weather tends to reflect and propagate aircraft noise more than clear weather.

L. Docter questioned the value of monitoring adherence to the glide slope, saying that he believed pilots were already doing the best job possible.

M. Ranta asked whether the glide slope could be increased from 3 degrees to 3.5 degrees.

R. Seymour stated that 3 degrees was standard across the U.S. but that 3.5 degrees was generally considered to be the upper bound. Higher glide slopes have a negative effect on passenger comfort.

In response to a question as to the difference between 3 and 3.5 degrees, D. Haferbecker said he did not know. M. Vigilante suggested that the Port work with Alaska Airlines to find out what the difference is.

When asked about the cost of implementing glide slope monitoring equipment, P. Dunholter replied that the Ports new noise and flight track monitoring system would have the capability of monitoring this. He did not know what the additional staffing costs and time would be to monitor glide slope compliance.

### **Other Business**

R. Seymour invited C. Blood to give an update on the letter sent by the Port to the FAA to request information on greater use of the Duwamish Corridor and Elliott Bay. C. Blood stated that the Port had received a letter from the FAA, but that Port staff were currently still investigating the letter to determine next steps. He noted that the letter seemed to lend itself to various interpretations and that attempts were being made to seek clarity from the FAA.

R. Seymour noted that discussions with various congressional delegations were currently under way.

R. Seymour stated that one interpretation is the FAA itself may be seeking clarity from the Part 150 Committees. Given that the full CAC/TAC has yet to make an official recommendation to the Port and the Port has yet to make its final decision to the FAA, it was suggested that the FAA may be reluctant to make any premature statement or agreement that could possibly compromise the integrity of the study. It was also suggested that the FAA might be reluctant to commit any resources for additional study until it had a clear sense of the committees' recommendations.

S. Alexander stated that it was not clear who might be conducting feasibility studies or where funds for such studies might come from. She noted FAA Administrator Garvey's recent initiative to redesign airspace nationwide and that this would involve considerable coordination among different regions.

Regarding the notes from the previous subcommittee meeting, C. Marshall asked that the first sentence of paragraph in section 7.A (p. 13) be modified to be consistent with the rest of the paragraph. As currently written, she felt that the opening sentence appeared to contradict the rest of the paragraph.

### **Public Comment**

A member of the audience requested more information on use of the Duwamish/Elliott Bay corridor.

### **Future Meetings**

R. Seymour and R. Dunkelberg gave an overview of coming meetings. A future meeting will be devoted to Fly Quiet Programs, while another meeting will deal with issues not yet discussed.

The meeting adjourned at 8 p.m.

**Sea-Tac International Airport FAR Part 150 Study Update  
Operations Subcommittee Meeting  
Wednesday, April 12, 2000  
6:00 p.m., Large Auditorium**

**Attendees**

**Subcommittee members:**

Rose Clark (City of Burien)  
James Combs (City of Seattle)  
John Current (for Cynthia Stewart, King County International Airport [Boeing Field])  
Arden Forrey (King County District #2)  
Dick Haferbecker (Alaska Airlines)  
Richard Kennedy (City of Des Moines)  
Mike Ranta (King County District #10)  
Mike Rees (for Betty Ivie, King County District #4)  
Scott Ridge (Alaska Airlines)  
Dr. Robert Rudolph (King County District #6)  
Billy J. Self (Southwest Airlines)  
Guy Spencer (City of Normandy Park)  
Eric Tweit (City of Seattle)

**FAA Staff:** Suzanne Alexander, Cayla Morgan

**Port Staff:** Charles Blood, Sarah Dalton, Ron Seymour, Bob Wells, Rob Kikillus, Marsha Holbrook, Rachel Garson

**Consultant Team:** Ryk Dunkelberg, Claire Barrett, Paul Dunholter, Mary Vigilante, and Michael West

**Members of the public**

**Handouts:** Agenda, "Fly Quiet Programs", Letter from Gina Marie Lindsey

**Welcome and Introductions**

R. Seymour welcomed attendees and stated that the purpose of the evening's meeting would be to discuss Fly Quiet programs – specifically which elements members deem to be most important. The Fly Quiet issue will be formed into a Subcommittee recommendation at the next Operations meeting on May 10.

Turning to scheduling issues, R. Seymour then noted a number of schedule changes related to meetings of the Port Commission. He stated that the scheduled joint meeting of the Citizens Advisory Committee and the Technical Advisory Committee on Operations Subcommittee Meeting April 12, 2000



Wednesday, April 26 at 6 p.m. would take place as planned in this room. The topic for that meeting will be Subcommittee recommendations on all issues discussed up to this date, including flight tracks, other operational issues and land use.

R. Seymour then noted that the Port of Seattle Commission has directed staff to expedite the Port's decision process on flight tracks. Referring to a letter from Gina Marie Lindsey, which was available as a handout, R. Seymour emphasized that the Commission considered the flight track issue to be sufficiently important that they did not want to wait until August to make their recommendations. The new meeting schedule is as follows:

May 9	First reading of Port Staff's recommendations on flight tracks
May 18	Special Commission Public Hearing on flight tracks
June 13	Final Commission recommendations on flight tracks
August	Final Commission recommendations on other Part 150 issues

R. Clark asked whether committee members would be able to make a separate presentation to the Port Commission on May 9. R. Seymour stated that this would be possible. He noted that the meeting on May 9 would be a regular Commission meeting. It will be held either in downtown Seattle or at the Bell Harbor Conference Center (Pier 69). Prior notice will be given to committee members and the public as to the time and place of the meetings. At the public hearing on May 18 (currently scheduled for the auditorium where this and other Part 150 meetings take place), members of the public will be allowed to speak for 3 minutes; elected officials and citizen groups will be allowed to speak for 5 minutes. It may be possible for citizens to phone in ahead of time to reserve a time at which to make comments, so that they will not be required to attend the entire meeting.

R. Rudolph noted two corrections to previous meeting minutes. The first involved corrections to the voting regarding close-in versus far out procedures for the last Operations Subcommittee meeting on Feb. 9. The correct vote was as follows:

Close-in:	7	(Kennedy, Docter, Spencer, Tweit, Combs, Clark, Rudolph)
Far out:	2	(Marshall, Ranta,)
Status quo:	2	(Impett, Haferbecker)

R. Rudolph then asked for clarification regarding the City of Bellevue's position regarding the split east turn as noted in the minutes of the Dec. 1<sup>st</sup> 1999 meeting of the CAC. R. Seymour and the consultant team said they would check their notes and report back. The corrected minutes will be posted to the website.

Regarding the previous meeting minutes, A. Forrey requested that the discussion of the glide slope intercept from the north and the apparent difference with glide slope intercept from the south be added. Regarding previous questions from committee members about glide slope and aircraft noise, D. Haferbecker (Alaska Airlines) stated

that currently there is no definitive answer as to the difference in aircraft noise created by a glide slope of 3 degrees versus a glide slope of 3.5 degrees. In addition, for the sake of consistency nationwide, Alaska Airlines prefers the current 3 degree glide slope.

C. Barrett then introduced the potential elements of a Fly Quiet program. She noted that Fly Quiet programs are actually a family of policies and that there is no prescribed format or content to a fly quiet program. Communities have a fair amount of latitude in constructing their own program, although certain policies such as ones that propose fines against airlines or propose certain restrictions on operations may require a Part 161 study.

Basically, potential elements of Fly Quiet program could include:

1. Noise abatement flight path compliance
2. Tracking adherence to noise abatement departure climb profiles
3. Maintaining arrival glide slope use during VFR conditions
4. Maintaining desirable minimum altitudes
5. Late night departure profiles
6. Analysis of noisiest single event flights
7. Monitoring adherence to nighttime run-up rules
8. Special studies

A. Forrey stated that more data was necessary.

C. Barrett responded that there would be a considerable amount of data available with the new Noise Monitoring System and that methods of categorizing data could include:

1. Airlines or groups of airlines
2. Aircraft type
3. Deviation from flight tracks
4. Available navigation equipment on board aircraft (i.e., FMS)
5. Time of day/night
6. Flight stage length/distance
7. Weather

M. Rees stated that some kind of scoring system was necessary, analogous to the periodic public airline surveys related to on-time performance, baggage handling complaints, etc. P. Dunholter noted that nearly all scoring systems have some degree of arbitrariness built into them. C. Barrett noted that scoring would involve weighing the different elements according to criteria established by the committee. She noted that possible elements in scoring could include:

- Measured single-event noise levels
- Measured cumulative noise

- Single flight track information
- The large volume of flight track data

M. Ranta suggested that additional elements should also include fleet mix, whereby older, noisier aircraft would be penalized more heavily than newer, quieter aircraft. He also noted that the number of passengers carried on an aircraft might be factored into scoring as well.

J. Combs noted that for the communities affected by aircraft noise, the number of passengers inside the aircraft did not have much meaning. What mattered more to communities, he said, was the frequency of aircraft and the noise they produced, not how many people were inside the aircraft.

M. Ranta conceded, noting that freight operations presented a different problem altogether, since there was no correlation between passengers and aircraft noise for freight aircraft.

B. Self noted that the noise monitoring system currently installed at Dallas Love Field is similar to the one being installed at Sea-Tac Airport, and that it will record many different types of data. He noted that all airlines are very interested in learning where aircraft noise is coming from and that all airlines want to work to reduce aircraft noise.

G. Spencer asked what the product of the Fly Quiet program is. R. Seymour responded that previous efforts produced benefits such as a noise budget or some kind of monitoring program that will allow the Port to work directly with airlines to reduce aircraft noise. P. Dunholter added that Fly Quiet programs take existing programs and adds new ones to help reduce noise more effectively as new technology is developed. He noted that Fly Quiet programs are "leading edge" and that Sea-Tac Airport is already more advanced than most other airports in the country in this field. He noted that San Francisco International Airport has "excedence reports" (noting instances when noise exceeds a certain threshold or a certain duration) that are included in monthly noise reports, but there are no fine mechanisms to impose fines on airlines.

C. Barrett noted that airlines do indeed pay attention to the periodic surveys published in the media and that they care enormously how they are perceived by the public.

R. Rudolph noted the need for incentives for airlines, and that such incentives might include reductions in gate fees. G. Spencer added that giving airlines a choice of gates might also be an incentive.

A. Forrey noted the need for more measurable data.

S. Alexander noted that newer noise monitoring systems already provide as much data as is available.

A number of committee members expressed a desire to see a permanent sitting committee to oversee noise issues, based on the current CAC. B. Self noted the existence of standing committees at a number of airports around the country. R. Seymour noted that the Sea-Tac Noise Abatement Committee (SNAC) has been in existence for ten years and that committee member R. Rudolph is also a member of that committee.

M. Rees asked whether incentives could be extended to FAA controllers in addition to airline pilots. S. Alexander responded that this might be a possibility, but it was beyond the purview of the FAA to participate in scoring airlines in the periodic surveys published in the media.

D. Anderson wondered whether it might be possible for a citizen group to offer \$1000 to a particular airline or a particular pilot as an incentive for fly quiet operations. D. Haferbecker responded that it would be difficult to give the money to an airline and have the airline distribute it to a specific pilot. C. Barrett noted that \$1000 did not represent a very substantial sum for an airline, but some kind of "event" could be arranged for a specific pilot. She also reminded committee members that any action involving changing landing fees or gate leases would likely trigger a Part 161 study. E. Tweit suggested that all incentive programs be kept simple.

R. Seymour noted that all 25 stations would supply data to the new monitoring system. E. Tweit wondered whether it might not be possible for pilots to avoid flying over noise monitors if they knew their location. P. Dunholter responded that he thought such stories were inaccurate and that he had never heard of pilots doing this.

A. Forrey called for the need for more data. R. Kennedy voiced his concern that there might be too much data generated and emphasized that the focus of the study should be the effects of aircraft noise on people, and that the committee should try to minimize the effects of noise on people who are already adversely affected. M. Rees concurred, stating that the goal of the study was the overall reduction of aircraft noise.

G. Spencer concurred and asked whether it was possible to know the number of passengers or the exact cargo weight of a particular aircraft. P. Dunholter replied that this is not currently possible and that airlines are reluctant to release that information for reasons of competitiveness with other airlines.

B. Self stated that even without knowing the exact number of passengers and freight manifests, it was still possible to get a reasonably approximate figure by examining published figures as to stage length of aircraft and average passenger loads.

M. Ranta asked B. Self what mattered to Southwest Airlines. B. Self replied that Southwest wants to both be a good neighbor and be perceived as a good neighbor. He noted that pilots rarely deviate from the headings they are given, as deviations could

result in a \$10,000 fine from the FAA. He stated that the idea that pilots regularly wander from their prescribed flight paths has little basis in fact.

D. Anderson asked how Southwest pilots typically pick up the glide slope on approach. B. Self responded that on VFR, pilots intercept it from above. He noted that from the outer marker inbound, Southwest pilots do not come in under the glide slope. D. Anderson noted that the outer marker is located at Boeing Field, and suggested that beyond the outer marker, some pilots may in fact be intercepting the glide slope from underneath. Self replied that the policy of Southwest Airlines was that pilots stay as high as possible as long as possible, and come in as fast as possible. He noted that this was for economic reasons in addition to minimizing noise.

J. Combs asked how it might be possible to share information about pilot practices that minimize noise with all airlines. M. Ranta asked how this information was shared at other airports. P. Dunholter said he would check into this.

M. Ranta said that his preference for elements of a Fly Quiet program should include:

- Type of aircraft
- Unusually loud (single) events

E. Tweit stated that his preference would be for:

- Single events
- Frequency of events
- Aircraft fleet mix

He added that his desire was for airlines to phase out noisier aircraft as soon as possible.

R. Clark asked whether a Fly Quiet program could replace the current noise budget. She expressed her community's concern about single event noise and voiced frustration with the expression of noise in terms of averages such as DNL. R. Seymour suggested that a Fly Quiet program could replace the noise budget.

R. Rudolph stated that the frequency of operations was a particular concern for his community.

G. Spencer stated that he wanted to see included:

- Number of awakenings
- Number of citizen minutes of indoor/outdoor speech interference, to be measured in terms of passenger miles for arriving and departing flights

M. Ranta asked whether the committee should concern itself with noise in other communities beyond Puget Sound. G. Spencer replied yes.

M. Rees had questions and comments about the Fly Quiet program handout. On p. 8-2, he questioned the use of the term "a reduction of noise by 50%" and suggested that it be changed to read "a reduction of DNL by 3 dB." He stated that otherwise he found it misleading to suggest that noise was actually reduced by 50%. P. Dunholter explained that a 3 dB reduction in DNL amounted to a 50% reduction in noise energy.

M. Rees continued that on p. 8-4, bullet number 4, "Whether or not aircraft were equipped with FMS" be changed to reflect whether or not aircraft equipped with FMS were actually using it. S. Alexander replied that if the control tower knows that an aircraft is equipped with FMS, it is automatically given instructions using FMS. If that aircraft's FMS is not operational, the pilots will automatically report that, and the crew must be given a new set of instructions. The fact that the aircraft's FMS is not operational is furthermore noted by the tower for future use.

### **Public comments**

At this point comments were invited from the public. One citizen stated that in the handout on p. 8-1, the terms "noise reduction" and "insulation program" could be misleading because noise reduction did not apply to the entire Puget Sound region, and the insulation program was available to residents of a limited geographic area.

Another citizen asked a procedural question about what would happen next in the Study. R. Seymour replied that the subcommittee and consultants would make recommendations to the full committees at their meeting on April 26. The citizen asked whether the new Noise Monitoring System could be demonstrated to the public. R. Seymour replied that the system is currently being installed and that the Port is awaiting permits from a number of communities prior to installing microphones. He said that currently installed monitors are already transmitting data, and once the trial period is finished and all monitors are regularly transmitting data, such a demonstration will be possible.

Another citizen expressed concern about a small number of aircraft that make considerable noise in the middle of the night. He wondered whether these aircraft could be re-routed over industrial areas so as to produce less sleep interference. R. Seymour responded that the Port is aware of this problem and that Port staff is currently working with the FAA and airlines to see what can be done about these aircraft.

A citizen residing in the north Capitol Hill/Montlake/Husky Stadium area asked where the closest noise monitor was located. R. Seymour responded that the closest monitors were located near the Maple Leaf Reservoir and in the south Capitol Hill area near Jackson Street.

M. Rees stated that committee members would like to have a map showing the location of noise monitors that they could transmit those locations to their constituents.

**Sea-Tac International Airport FAR Part 150 Study Update  
Operations Subcommittee meeting, Wednesday May 10, 2000  
6:00 p.m., Large Auditorium, Sea-Tac International Airport**

**Attendees**

**Subcommittee members:**

Suzanne Alexander (FAA)  
Duane Anderson (King County District #5)  
Rose Clark (City of Burien)  
James Combs (City of Seattle)  
Dick Haferbecker (Alaska Airlines)  
Mike Rees [for Betty Ivie (King County District #4)]  
Billy J. Self (Southwest Airlines)  
Paul Johnson (FAA)  
Richard Kennedy (City of Des Moines)  
John Williamson [for Connie Marshall (King County District #12)]  
Mike Ranta (King County District #10)  
Dr. Robert Rudolph (King County District #6)  
Guy Spencer (City of Normandy Park)  
Eric Tweit (City of Seattle)

**Port Staff:** Ron Seymour, Charles Blood, Bob Wells, Lynae Jacobson, Rachel Garson, Stan Shepherd, Rob Kikillus

**Consultant Team:** Ryk Dunkelberg, Claire Barrett, Paul Dunholter, Mary Vigilante, Michael West

**Members of the public**

**Handouts:** Agenda; "Part 150 Noise Compatibility Planning Study," Section III; Port Staff Memorandum to Port Commission of May 8, 2000 (Staff Briefing and Recommendations on Flight Track Alternatives)

**Welcome and Introduction**

Ron Seymour welcomed subcommittee members to the last scheduled meeting of the Operations Subcommittee. He then briefly described the purpose of the meeting, which was to discuss recommendation items related to preferential runway use, Fly Quiet programs, maintenance run-ups, Flight Management System approaches through Elliott

Bay, and voluntary nighttime restrictions on aircraft under 75,000 pounds. He then turned over the discussion to the consultant team.

#### Fly Quiet:

Paul Dunholter began with a presentation of Fly Quiet programs and the new noise monitoring system that is currently being installed at Sea-Tac Airport. Mike Ranta asked what the time frame for implementation is. Stan Shepherd of Port staff replied that Phase 1 of the system has been accepted and the system at its current configuration can measure up to 50% of aircraft noise. Paul Dunholter added that it is expected that the system will be completely operational by summer 2001. Jim Combs (City of Seattle) stated that a good public education campaign was necessary to inform the public about the new system and noise monitoring procedures.

In the discussion of awakening potential, Mike Rees stated that the figure should be expressed in units of 1000 passengers rather than 1 million, since the lower figure would be easier to understand. He asked what the procedure would be to measure awakening potential for cargo aircraft, since they carried no passengers. Dunholter replied that a per ton calculation for cargo aircraft could be created.

Mike Rees asked about the altitude of arriving aircraft and whether it would be possible to determine if aircraft were above or below glide slope. Jim Combs suggested that the language be modified to state whether the aircraft was in compliance with FAA and ATC directives, since aircraft are sometimes instructed by the tower to intercept the glide slope at varying angles.

Discussion then turned to DNL and SEL. One committee member expressed a preference for SEL rather than DNL as a metric. Mary Vigilante suggested that distinctions be made between single events and loudest events. Paul Dunholter suggested the possibility of determining another way of expressing this. He suggested representing the sum of all noise energy produced by a particular airline as one way of looking at it. For example, he noted the difference between an airline that flies older, smaller aircraft that carry fewer passengers, such as F-28s, and airlines that fly newer, larger, quieter aircraft such as 757s. Guy Spencer asked whether it would be possible to express the number of events with Time Above a certain threshold. Claire Barrett clarified that the Noise Monitoring System would keep track of single events and that the noisiest of these would be listed as part of Fly Quiet. Dunholter added that the monitoring system has trouble recognizing Time Above for a single event due to the fact that there is often other noise occurring at the same time from a number of unrelated events and sources.



Spencer then asked how noise from cargo aircraft was expressed. Dunholter said that it was expressed generally in terms of cargo payload totals. It was suggested that cargo airlines be analyzed separately from passenger airlines. Spencer also suggested that the wording of "potential awakenings" be changed to "probable awakenings".

Mike Ranta expressed concern over the use of DNL and suggested the term "quiet quotient" in its place. He also suggested that an ongoing review of this process be conducted. After discussion of the wording, the subcommittee then voted to make the following recommendation for a fly quiet program:

**Fly Quiet Recommendation:**

"A Fly Quiet Program should be developed and implemented at Sea-Tac Airport that will monitor, track and report flight operations and procedures as to their effectiveness in reducing overall noise levels, based on adherence to procedures, contributions to overall Quiet Quotient (DNL), loudest noise events and awakening probability. The final version of individual elements will be developed by a future public committee."

**Preferential Runway:**

Discussion then turned to preferential runway use (north flow vs. south flow). Currently south flow accounts for approximately 66% of all operations. Mary Vigilante noted that the runway slopes down by approximately 40 feet at its southern end. Given the length of the runway, this is not a particularly significant slope, but Ron Seymour noted that in hot weather, many heavier aircraft (typically bound for Asia) prefer south flow departure, as this will provide increased lift for takeoff. South flow is generally more efficient considering the layout of taxiways, gates at Sea-Tac and operations at King County Airport (Boeing Field). Suzanne Alexander (FAA) added that Boeing Field operations constituted a major factor in determining the increased efficiency of south flow operations at Sea-Tac.

Billy Self (Southwest Airlines) stated that while it is possible for an aircraft to take off with a light tail wind (with the wind behind it), pilots nearly always prefer to take off into the wind. He also noted that an aircraft taking off with a tail wind will actually create more noise than an aircraft departing into the wind, as it needs more power, climbs more slowly and is lower. Suzanne Alexander noted Seattle's unique micro-weather phenomena, stating that winds at Sea-Tac Airport are sometimes different than winds at nearby Boeing Field. When this condition exists, air traffic control is considerably complicated. Occasionally, Sea-Tac must tailor its operations to operations at Boeing Field in order to minimize conflicts between the two airports. She also noted the Puget Sound region's convergence zone, in which there are strong winds

at higher altitudes. These winds sometimes require additional effort on the part of controllers.

Guy Spencer asked whether aircraft use all the runway. Alexander stated that generally this was true for jet aircraft but not true for propeller aircraft, which do not require as much of the runway.

Richard Kennedy questioned the use of the word "require" in the Port Staff's recommendations to the Port Commission on p. 4: "Nearly 70% of the year, weather conditions require that Sea-Tac Airport operate in a South Flow orientation..." Specifically he asked whether "require" was accurate. He asked what was the maximum allowable tailwind for an aircraft to take off. Paul Dunholter replied that generally an aircraft could take off with a maximum tail wind of 8 knots, but this was not absolutely true for all aircraft in all conditions. Mike Ranta asked whether fuel consumption was an issue in taking off with a tail wind. Billy Self replied that it was not and clarified Dunholter's statement that for certain aircraft the maximum allowable tailwind was 5 knots, not 8.

Guy Spencer asked whether 55% of the winds came from the south. Dunholter replied that 25% of the time winds are calm. He defined "calm" to mean winds varying from zero to five knots. He repeated that north flow conditions prevailed approximately one-third of the time, and south flow prevailed approximately two-thirds of the time. Guy Spencer stated that a ten-year table of prevailing wind conditions would be helpful, noting that 1998 was a particularly unusual year for weather. Suzanne Alexander noted that she observed more north flow conditions last winter than at any other time during her tenure at Sea-Tac Airport, but she also stressed that anecdotal or perceived conditions were not always corroborated by weather data.

Jim Combs asked S. Alexander whether the FAA considered the mix of aircraft in assigning departure procedures. Alexander stated that it depended on the time of day and whether the airport was in the middle of a departure or arrival "push" or cluster of operations. She noted that a considerable number of heavier aircraft depart around 1 pm each day. She stated that if operations changed from one flow to another in the middle of a given push, it always produced delays. She also noted that occasionally pilots tell the tower that their aircraft can depart only a certain way (typically to the south). She reminded committee members of the downward slope of the runway at its southern end. Duane Anderson noted that Sea-Tac operations have a direct effect on operations at Boeing Field, and that smaller, lighter aircraft (General Aviation) are particularly sensitive to wind. He expressed concern that changes in operations at Sea-Tac could potentially significantly alter operations at Boeing Field, particularly for

General Aviation aircraft. Alexander stressed that safety and efficiency are the two overriding concerns in determining operations, and that the kinds of changes under discussion most often occur at night and not during the day.

Discussion then turned to Figure III.1a of the handout (p. III.24-4), "Change in DNL Noise Levels South of the Airport for the 2004 Annual DNL Noise Contours." Duane Anderson asked whether the change in contours predicted if runway use were more evenly divided between north and south flows amounted to a shifting noise. Dunholter replied that this was a possibility. Mike Ranta then asked whether such changes would trigger the need for a new Environmental Assessment or Environmental Impact Statement (EIS). Mary Vigilante and Paul Johnson (FAA) said that if a formal preferential runway program were adopted, environmental analysis was likely.

In the discussion of preferential runway use, Guy Spencer asked what the overall effect on noise would be on the introduction of quieter aircraft by 2004. Dunholter replied that by that time approximately half of Horizon Airlines' F-28s and half of Alaska Airlines' MD-80s would be replaced. In terms of DNL, this would represent a reduction of approximately 2dB or roughly 60-80 departures of the noisiest aircraft eliminated. Spencer asked what this represented in terms of SEL and what the difference was in terms of noise for departing vs. arriving aircraft. Dunholter replied that a 747-400 generally makes as much noise taking off as it does arriving, that a departing 757 is generally 5dB louder than an arriving one, and that departing MD-80s are generally 10-15 dB louder than arriving ones.

Dick Haferbecker (Alaska Airlines) stated that he thought Dunholter's figure of one-half of the MD-80's being replaced by 2004 seemed high and that the correct figure was more likely closer to one-third than one-half. He noted that Canadair Regional Jets (CRJs) will begin replacing Horizon F-28s beginning in 2002.

Guy Spencer stated his opinion that communities south of the airport were unfairly discriminated against and raised the issue of environmental justice. Suzanne Alexander stated that the FAA sends aircraft out with no regard to a particular community and that such decisions are made based on safety and efficiency. Paul Johnson concurred that the FAA was not singling out any particular community in its directives to pilots.

Rose Clark questioned whether the slope at the southern end of the runway couldn't be filled in. Paul Johnson replied that the slope was naturally occurring and allowable. Ron Seymour reminded the committee that this difference was so slight as to be significant only on particularly warm days and for particularly heavy aircraft that needed all the additional lift they could get to take off.

Robert Rudolph asked whether a preferential corridor had been established under Temple Johnson's tenure with the FAA. Suzanne Alexander said she would check on this.

Duane Anderson asked for more comment and discussion before moving to a vote. Billy Self stated that Southwest Airlines would support the use of a preferential runway. Mike Rees stressed the importance of maximizing use of FMS over non-residential areas. Billy Self noted that not all aircraft are equipped with FMS. Paul Dunholter stated that the newest aircraft are usually equipped with FMS. Suzanne Alexander noted that non-FMS-equipped aircraft could be given headings that approximate FMS procedures. She stated that it would benefit FAA to have such procedures established, so that the FAA didn't have to create flight headings for those pilots. She stated that this was an issue related to pilot education.

Duane Anderson stated his opinion that this was still shifting noise and that sufficient data was lacking to make a recommendation. Mike Rees noted that each year some 30 to 40 new flights are added and that this amounted to a regular increase in noise over current flight tracks. Anderson clarified that while it was not possible to control the number of new flights added each year, it was possible to make recommendations as to preferential runway use. He noted that departing aircraft still needed to fly over a large number of people to reach their preferred corridor.

Mike Ranta noted that approximately 20% of aircraft do not adhere to prescribed flight tracks and asked S. Alexander why this is so. Alexander replied that in many cases it is a matter of air traffic controllers being over-burdened or momentarily distracted.

Duane Anderson noted the committee's previous vote to recommend use of FMS over the Duwamish Corridor/Elliott Bay. Bob Rudolph pointed out that there is an established noise abatement corridor for north flow and not for the south. This argues for more north flow especially at night. Billy Self stated that airlines would support night use of a preferential runway from 10 PM to 6 AM.

The subcommittee then voted to recommend the following with regard to preferential runway use:

**1. Support the North preferential runway use at night during curfew hours (10 PM to 6 AM) through Elliott Bay:**

Yes (5): Rudolph, Self, Clark, Kennedy, Spencer

No (2): D. Anderson, J. Williamson (for Marshall)

Abstain (5): Haferbecker, Rees (for Ivie), Tweit, Combs, Ranta

**2. During calm conditions (winds 0 -- 5 knots), preferential runway use is north flow (24 hours):**

Yes (3): Clark, Kennedy, Spencer

No (5): Anderson, Rees (for Ivie), Self, Williamson (for Marshall), Tweit

Abstain (4): Haferbecker, Rudolph, Combs, Ranta

**3. Support 50-50 split of north flow / south flow during calm conditions:**

Yes (5): Rudolph, Clark, Ranta, Kennedy, Spencer

No (6): Anderson, Rees (for Ivie), Self, Williamson (for Marshall), Tweit, Combs

Abstain (1): Haferbecker

**Maintenance Runups:**

Discussion then turned to maintenance run-ups. Committee members considered recommending that run-up restrictions be extended by one hour from 7am to 8am on weekends. Dick Haferbecker (Alaska Airlines) stated that because many aircraft depart during the 7-8am "push" Monday through Saturday, extending the restriction to 8 am on Saturday could possibly result in the cancellation of a number of Alaska flights at Sea-Tac Airport. He noted that many vacation travel packages are coordinated with Saturday departures from Seattle.

Committee members then discussed the fines assessed to airlines found to be in violation of run-up restrictions. Guy Spencer suggested that the penalty be made larger than the cost of operating an aircraft. He asked D. Haferbecker what the hourly cost of operating an aircraft is. Haferbecker replied that the cost runs generally between \$7000 and \$8000 per hour.

Rose Clark asked where the money collected from fines goes and asked whether it could be targeted to certain communities. Ron Seymour replied that fines were directed to noise abatement programs but that it was doubtful that funds could be targeted to a particular community.

Discussion then turned to the issue of maintenance run-ups associated with scheduled "C" and "D" maintenance checks on aircraft. Ron Seymour stated that there is typically a certain degree of discretion in the two checks such that engine run-ups might be scheduled between early morning and late evening. Dick Haferbecker said that he would check with Alaska maintenance engineers to determine which engine maintenance run-up procedures were discretionary as to scheduling. There was a

general agreement among committee members to recommend that discretionary run-ups during early weekend hours should be avoided whenever possible.

Mike Rees asked whether consideration had been given as to the implementation of the Part 161 process for Sea-Tac Airport. Ron Seymour stated that since the beginning of the current Part 150 Study Update, the Port of Seattle has gone on record as wanting to avoid the Part 161 process. The reasoning behind this position is that to date no airport has successfully completed a Part 161 process, despite having spent millions of dollars.

Billy Self noted that recently Congress has been asked to include Stage 2 aircraft weighing less than 75,000 pounds as part of the FAR Part 91 mandated phase out of noisier aircraft. (Currently they are excluded from Part 91 deadlines.) Ryk Dunkelberg noted that Detroit Metro Airport has recently incorporated language related to Stage 2 aircraft under 75,000 pounds as part of its Part 150 study update.

#### **Recommendations:**

Finally, the committees voted to forward the following recommendations to the full CAC/TAC committees.

#### **Maintenance run-ups:**

- Adopt the revised run-up aircraft priority so that under south flow conditions the secondary position is used for wide-body aircraft.
- Extend the 2-minute run-up restriction by one hour from 7am to 8am on weekends.
- Increase fines for run-up violations at night from \$100 to \$1000 for the first violation, to \$2000 for the second violation and \$4000 for the third violation. For violations thereafter there would be a doubling for every violation during a 12-month period.
- This fine would be implemented once the new noise monitoring system has been fully installed and tested for reliability.
- Include run-up monitoring in a Fly Quiet Program.
- Prohibit discretionary run-ups before 9am on weekends, with the term 'discretionary' to be defined by a newly created advisory committee.

#### **FMS curved approach through Elliott Bay:**

- Work with the FAA to develop a curved approach using the Duwamish Noise Abatement Corridor for aircraft arriving from the west.
- This would be a long-term goal as technology develops.

#### **FMS assignment for departures through Elliott Bay:**

- Request that FAA assign FMS departure procedure to all properly equipped aircraft, with non-FMS aircraft to be given an equivalent procedure.

#### **Voluntary Stage 2 nighttime restriction on aircraft under 75,000 pounds**

- Work with airlines on limiting operations by Stage 2 aircraft weighing less than 75,000 pounds. If no agreement is reached by the end of 2003, the Port would initiate an FAR Part 161 to achieve such an objective.

#### **Port Staff Recommendations on Flight Tracks:**

Discussion then turned to comments regarding the Port Staff recommendations made to the Port Commission at their regular meeting on May 9. A number of committee members expressed their disappointment with some of the Staff's recommendations. In total, Port staff concurred with committee recommendations on five of the alternatives but disagreed with committee recommendations on three alternatives. There was discussion of the wording on p. 16 of the Memorandum, specifically the difference between "increasing use of the Duwamish/Elliott Bay Corridor (with FMS)" and "maximum use of the Duwamish/Elliott Bay Corridor." Guy Spencer clarified the committee's comments and said that while the wording of the votes still stood, the interpretation of the votes supplied by the Port still needed revision. Robert Rudolph and Rose Clark concurred and urged that the revised interpretation be sent to Port Commissioners. Ron Seymour stated that he would try to revise the wording of the interpretation of committee votes, but he himself did not have the authority to guarantee that the wording would be changed and forwarded to the Port Commission. He explained that he is one of a group of Port staff responsible for the Memorandum, and he does not have the authority to unilaterally revise it and forward revisions to the Port Commission. Guy Spencer stated that if other Port staff disagreed with the revised language proposed by the Committee, Seymour should notify committee members as soon as possible.

Mike Rees continued the discussion of p. 12 of the Staff Memorandum, turning to the phrase "improve the overall noise environment, not shift noise from one residential community to another." He asked whether the phrase "not shift noise from one residential community to another" had not in fact been altered during the committee meeting held last June (1999). Jim Combs noted that a majority of the committee members had in fact voted to strike the phrase, but that there had been dissent among the committee. Robert Rudolph asked that Mike Rees' comments be included in the same letter to the Port Commission explaining the revised language.

A number of committee members expressed particular disappointment with the Staff recommendation against the Two Track South Flow Departure option, which was

contrary to the committee recommendation. Ron Seymour explained the Staff's reasoning which led to this recommendation. Port Staff felt this option did not reduce total noise but did shift noise from one community to another. He also mentioned opposition from the City of Kent.

A number of committee members representing communities south of Sea-Tac Airport felt that their communities were unfairly burdened. Seymour sympathized with the committee's sense of frustration at the outcome of certain Port Staff recommendations but reminded committee members that they had all worked hard and accomplished much for their respective communities. Claire Barrett amplified Seymour's comments and noted that the committees' considerable hard work had in fact produced consensus on a number of flight track issues which the Port Staff had recommended to the Commission.

The meeting adjourned at 8:45 pm.



## **Sea-Tac FAR Part 150 - Noise Study**

### **Citizens' Advisory Committee Meeting**

**Tues. Nov 18, 1997 6-9 pm**

**Large Aviation Conference Room - Sea-Tac Airport**

#### **Present:**

Arden Forrey, Joanne Schaut, Nancy Cleminshaw, Bud Jones, Al Furney, Rose Clark, Steve Mullet, Richard Kennedy, Bob Wells, Jim Combs, Ryk Dunkelberg, Claire Barrett, Mike Anderson, Ron Seymour, Michael West, Lynae Jacobson, Chip Doring, Rachel Garson, Bruce Davis, Lloyd Docter.

#### **Introductions and Announcements (Wells):**

Committee members, consultant team, Port of Seattle staff introduced. Ryk Dunkelberg noted that Michael West, Mary Vigilante are local contacts. Bob Wells noted the size and relatively large budget for the study. The scope of work is intended to be flexible, a working document.

#### **Announcements: Kick-off meeting Dec. 3 4-8 pm**

#### **Presentation of project schedule (Dunkelberg)**

Meeting schedule: input solicited by consultants as to participants, date and time, topic. One committee member indicated that certain members may want to meet more often than scheduled. Another member stated that it would be preferable to have more specific dates rather than loosely defined dates. A six-month schedule of meetings, decisions and action items would be helpful. NB: A meeting schedule is also available on this web site at

[http://www.airportnetwork.com/sea/sea\\_schedule.htm](http://www.airportnetwork.com/sea/sea_schedule.htm)

Concern was expressed that the Committee be used as a resource rather than simply a source of approval for action items or a "rubber stamp."

Land Use mapping begins at 55 DNL contour; Base mapping begins above 55 DNL.

## **Presentation of public involvement plan (Barrett)**

A committee member asked whether there would be any environmental representation on the committees. Bob Wells responded that the FAA participation includes environmental representatives, but there are no official environmental representatives. One committee member suggested that local schools and hospitals be represented, including Highline and Tukwila (formerly South Center)

Two committees are established: the Citizens Advisory Committee and the Technical Advisory Committee. One of the goals of committee formation is that information be shared freely so that the perception of different kinds and qualities of information is avoided. One way of avoiding this would be to have committee members from one committee participate in the other committee. The formation of sub-committees (proposed: Close-In Noise, Farther Out Noise, and Land Use) would be another way of assuring "cross-fertilization" and greater participation.

The question was raised as to the product of committees. Various possibilities, but primarily reports.

Newsletter (Forum) devoted to Part 150 study will be mailed next week of Nov. 24.

NB: the Public Involvement Plan is available on the web site at

[http://www.airportnetwork.com/sea/sea\\_PIP.html](http://www.airportnetwork.com/sea/sea_PIP.html)

## **Plans for Dec. 3 Open House**

### **Discussion of specific concerns**

- o Engine Run-Ups
- o Evening Flights (after 7 pm)
- o Nighttime Sleep Disturbance
- o Adherence to Flight Tracks
- o Evaluation of Flight Tracks
- o Departure Profiles
- o Identification of Noise-Sensitive Areas

### **Discussion of study goals, policies and procedures**

Discussion of Part 161 process; origin and inherent difficulty of Part 161 process.

### **Other business:**

A meeting to identify portable noise monitoring sites was tentatively set for 3<sup>rd</sup> week in January. Several members said that Monday and Tuesday nights were not convenient. Wednesday nights were agreed to be the most desirable. Tentative meeting date set for Wed. Jan 21<sup>st</sup>.

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## **Sea-Tac FAR Part 150 - Noise Study**

### **Technical Advisory Committee Meeting**

**Wed. Dec. 3, 1997 12-3 pm**

**Large Aviation Conference Room - Sea-Tac Airport**

#### **Present:**

Cynthia Stewart, Carolyn Read, Michael West, Dan Boyle, Stephen Kiehl, Neil Bennett, Guy Spencer, Mark Benedum, Craig Ward, Patrick Dugan, Judith Kilgore, Gary Frentress, Rachel Garson, Clare Impett, Eric Tweit, Greg Fewins, Beth Jordan, Feff Fitch, Leigh Hughes, Vince Mestre, Lynae Jacobson, John Sommercamp, Moira Carr Bradshaw, Anna Gordon, Bob Well, Ron Seymour.

#### **Introductions and Announcements (Wells):**

Committee members, consultant team, Port of Seattle staff introduced. The scope of work is intended to be flexible, a working document.

#### **Announcements: Kick-off meeting Dec. 3 4-8 pm**

#### **Presentation of project schedule (Dunkelberg)**

Meeting schedule: input solicited by consultants as to participants, date and time, topic. The project is scheduled to cover a two-year span.

Two committees are established: the Citizens Advisory Committee and the Technical Advisory Committee. One of the goals of committee formation is that information be shared freely so that the perception of different kinds and qualities of information is avoided. One way of avoiding this would be to have committee members from one committee participate in the other committee. The formation of sub-committees (proposed: Close-In Noise, Farther Out Noise, and Land Use) would be another way of assuring "cross-fertilization" and greater participation.

The Part 150 process has a 5-year planning horizon, from 1997 to 2002.

CAC and TAC will meet on the same day, sometimes at the same time. The web site will be used to post information for members who are not able to attend meetings.

## Plans for Dec. 3 Open House

### Discussion of specific concerns

One committee member raised the question of possible competition between the Citizens' Advisory Committee and the Technical Advisory Committee. The best way to avoid competition is to insure frequent and clear dialogue among all parties and the verification that the same information is furnished to all parties.

Other concerns:

- o Overlap of cumulative noise with Boeing Field and other noise generators
- o Explanation of departure profiles
- o Regional fleet mix (equipment upgrades)
- o Cumulative effect on community stability
- o Environmental impact of noise
- o Schools; Time-Above and Single-Event
- o Explanation of compliance
- o Integration of the current study with other studies (past, present and future)
- o Coordination with scope of Metropolitan Transportation Plan

Because the TAC will by definition be considering issues that are technical in nature, it is suggested that technical data be broken down to the fullest extent possible into digestible parcels.

### Discussion of study goals, policies and procedures

Web site development: it is suggested that the airport web site be linked to related web sites such as the Public Access Network (PAN), King County and the Puget Sound Regional Council.

Discussion of Part 161 process, the origin and especially the inherent difficulty of the process. One committee member suggested that a matrix be generated that would list actions that would trigger a Part 161 study. Port staff explained that voluntary agreements can be sought rather than a Part 161 process.

It was suggested that the Noise Remedy Program boundaries be expanded to include schools, churches and multi-use facilities.

PSRC staff (Stephen Kiehl) suggested that PSRC has land-use maps that should be of interest to the committee. He expressed interest in sharing the data with the consultants.

Meeting schedule: the consultants' goal is to notify committee members of upcoming meetings two weeks to ten days before a meeting.

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Sea-Tac FAR Part 150 - Noise Study

Joint Meeting of the Citizens' Advisory Committee

and the

Technical Advisory Committee

February 4, 1998 6-9pm

Large Aviation Conference Room - Sea-Tac Airport

**Present:** Rose Clark (Burien Planning Commission); Arden Forrey (Hawthorne Hills); Al Furney (KC Council District #13); Dick Haferbacker (Alaska Airlines); Mary Davis (City of Normandy Park); Bud Jones (Sea-Tac); Bob Rudolph (CAC); Craig Ward (City of Sea-Tac); Steve Mullet (City of Tukwila); Joanne Schaut (City of Kent); Stephen Klehl (PSRC); Cynthia Stewart (King County Airport); Richard Kennedy (City of Des Moines); Mike Rees (KC District #4); Nancy Clemmshaw (KC District #4); Guy Spencer (City of Normandy Park; CAC); Mike Anderson (King County); Eric Twel (City of Seattle Planning Dept.); Cayla Morgan (FAA; Airports); Carolyn Read (FAA Seattle ADO); Rachel Garson (Port of Seattle); Vince Mestre (MGA); Gary Frentress (Highline Schools); Jim Combs (CAC); Port of Seattle Staff: Ron Seymour, Bob Wells, Jeff Fitch; Consultant Team: Paul Dunholter, Ryk Dunkelberg; Mary Vigllante

**Ryk Dunkelberg:** (Introductions). Ryk presented an overview and goals of meeting. This included a review criteria for noise monitoring sites and make site selections. Project notebooks were distributed. Format changes from schedule presented at open house were noted. Not all notebook material will be included on the web site. It will be available within the next few weeks.

**Committee:** Committee members inquired into the web site.

RD: URL will be: [airportnetwork.com/seal/](http://airportnetwork.com/seal/).

Ryk also introduced Paul Dunholter, who is responsible for the noise measurement program, and made the remainder of the presentation. The following is a synopsis of the presentation by Paul Dunholter.

Attendees should feel free to ask questions. The purpose of this meeting is to select noise-monitoring sites to be used in the Part 150 Noise Study only. This is different from the site selection for new locations for the Permanent Noise Monitoring System that is currently being updated by the Airport.

The goals for the noise monitoring program are defined in the following slide.

Overhead: goals of noise monitoring

- 1) Determine noise levels specific to Sea-Tac
- 2) Provide info to help in the evaluation of noise abatement efforts
- 3) Increase confidence in the results of the study

*(For a definition of asterisked terms, please refer to the TECHNICAL GLOSSARY available on this website.)*

**Work plan:**

- Existing 11 permanent long-standing monitoring sites, close to airport which record DNL\* and single event data\*
- 10 new semi-permanent sites, to monitor continuously for a week to 10 days, 4 times a year and, will identify aircraft type and correlate noise with a flight
- 10 short-term monitoring sites that will be used to measure short duration measurements where the monitor measures noise from 1 to 2 days at random times during the course of the study.
- monitors will be in backyards and will transfer data into a central computer
- monitors will measure A-weighted\* sound pressure level.
- would like to repeat some of the six sites that were used during the Expert Panel process. These would be in addition to the data from the permanent system sites. This data would be important to measure the changes in noise that have occurred over time.

*The following topics were discussed in response to committee questions:*

- The use of A and C weighted\* noise level monitoring was outlined. A-weighted monitoring will take place at all of the sites. Some short-term samples in terms of the spectral content of the noise (C-weighted) will also be determined.
- Separating aircraft noise from community noise is a difficult task within the measurement program. Aircraft noise is distinguished from background noise by finding a correlation between noise events and flights. Sequencing with network of monitors, a pattern comparable to a flight may be found. It is also possible to profile a noise event. There is a consistent sound signature or shape for each type of aircraft -- or bus or car, etc.
- The short-term portable noise monitoring sites can also be used to respond to specific monitoring requests by the committee. Committee members wanted to be sure that this approach showed flexibility in monitoring. Port staff stated that if any of the committee member's constituents feel that there isn't adequate monitoring in their area, then Port staff should be informed.
- There will be 10 semi-permanent monitoring sites. Each of these sites will be monitored for a week, four times a year, so that seasonal differences can be evaluated. Many factors change with the seasons. Air flow and density affect ground noise. Cold air inversions trap ground noise. On warmer days, planes tend to climb more slowly. Most people in the north think it's worse in summertime, and it is true that there is more northflow traffic, but it is also true that people are in their yards more frequently.
- Noise data gathered from these semi-permanent sites will be used among other things to correlate measured noise levels to levels predicted by the INM (Integrated Noise Model)\*. The model won't always be perfect at every location. Field measurements can help with areas of uncertainty and reduce errors, but a model has constraints.
- The latest version of the INM model is being used, there may be a new one at the end of the year.



- Data would be able to identify individual flight components, or single event noise levels that build DNL. Thus individual events such as a particular 727 will be possible to isolate and identify.
- In answer to a question about developing different INM contours to evaluate best and worst case conditions, P. Dunholter said that the data should be finite enough to help make judicious decisions about possible noise abatement options for the future. Developing an effective program is the goal, not perfect data.
- The staff will not make judgments regarding public opinion. The study will evaluate departure procedures, land use plans, fly quiet program to see if it's getting better or worse, compliance with flight track procedures and ground noise. It will not survey public opinion other than through the public participation process which includes public forums, a web site and numerous briefings. A public survey is not currently part of program

Criteria for choosing monitoring sites were presented.

Overhead: General goals

- 1) representative of noise sensitive land use such as residence or schools
- 2) proximity to flight paths or ground noise sources
- 3) secure to leave unattended for extended periods
- 4) quiet background noise representative of the area (not close to roadways, no barking dogs)
- 5) sites fairly dispersed around the Sea-Tac region including north and south of the airport
- 6) not near permanent noise monitors where the noise levels are already measured
- 7) located within the project study area
- 8) proximity to noise complaint areas
- 9) areas of community interest
- 10) some locations same as past measurement programs to identify trend of change in noise over historic levels

Overhead: Goals for semi-permanent sites

- 1) re-measure six expert panel sites if possible as these sites are regionally distributed and it will be valuable to have some historic data to compare changes
- 2) proximity to primary flight paths to measure potential benefits of different noise abatement procedures and flight path compliance
- 3) greater number of sites

- Microphones will be placed both under flight tracks and to the sides to measure both the length and width of the noise contours and the resultant noise exposure
- The model does not deal with topographic situations where there is no ground absorption. An example of this situation is a home on a hill to the side of the Airport where there is a direct line of sight between the noise event and the residence. Monitored noise data will help account for this phenomenon.
- The staff acknowledged that the experience of other airport Part 150 noise studies is being taken into consideration. Lessons are being learned from others' experience.

Overhead: Goals for close-in sites

- 1) sites exposed to noise from aircraft maintenance run-ups
- 2) exposure to thrust reverser noise and departure roll noise
- 3) on airport activities noise
- 4) sites spread in communities

Goals for short term sites

- 1) sites of community interest
- 2) sites near the semi-permanent locations where simultaneous measurements can be used to determine the relative difference in noise]

- The number of sites is determined by estimating the number that would be valuable and doubling it.
- [referring to map] showed geographic distribution of calls from the noise hotline, demonstrating a strong correlation with population density.
- Monitoring locations with low ambient noise levels are necessary, so study will avoid areas around I-5.
- 

Potential monitoring sites discussed:

- o Normandy Park

- o Highline Hospital, McMicken Heights, Highline High School, plus other schools
- o Mobile home parks to SE of Airport.
- o Tukwila
- o On hill in northwest
- o By Lake Young in southwest
- o Magnolia
- o University district
- o Rainier/Columbia City
- o Mercer Island
- o Kenmore
- o Bainbridge Island
- o Holly
- o Redmond
- o West Seattle – nighttime noise concerns

- The noise monitoring will include the measurement of some spectral noise data. While the primary measurement will be the A-weighted level, some spectral noise will be sampled at many of the sites around the airport, including the sites close to the airport where ground noise is more dominant.
- Many West Seattle folks are concerned about Elliot Bay nighttime departures when in North Flow Monitoring in West Seattle may be a good idea.
- The centerline over UW on approaches has been source of complaints: Kane Hall could be an option for a monitor.
- Highest school district impact would be Mt. Rainier School site.

Next meeting is not yet scheduled. The committee will be notified when dates are firmed up. A committee member suggested Wednesdays as good meeting days.

## Sea-Tac Part 150 Noise Study

# Minutes of Joint Meeting of the Citizens' Advisory Committee And the Technical Advisory Committee

SeaTac International Airport, June 24th, 1998

**Guests:** Bob Johnson, Roy Fuhrman, Metropolitan Aircraft Sound Abatement Council (MASAC), Minneapolis-St. Paul International Airport (MSP)

**Present:** Clare Impett (King County International Airport); Stephen Kiehl (Puget Sound Regional Council); Nancy Cleminshaw (King County District #4); Joanne Schaut (City of Kent); Rose Clark (City of Burien); Craig Ward (City of SeaTac); Guy Spencer (City of Normandy Park); Mike Anderson (Citizens' Advisory Council); Richard Kennedy (City of Des Moines); Claire Barrett (Consultant Team); Jim Combs (City of Seattle); Doug Hakala (King County District #3); Mr. Bader (for Arden Forrey, King County District #2); Mary Vigilante (Consultant Team); Cayla Morgan (FAA); Lynae Jacobson (Port staff); Al Furney (King County District #13); Alan J. Schmidt (Highline School District); Rachel Garson (Port Staff); Dick Haferbecker (Alaska Airlines); Tony Anderson; John Whitlock, Sea-Tac Noise Abatement Committee (SNAC); Ryk Dunkelberg (Consultant Team); Dan Boyle (FAA)

**Ryk Dunkelburg: Introductions.** This is a joint meeting of the Citizens' Advisory Committee (CAC) and the Technical Advisory Committee (TAC)

**Background:** The Part 150 Study Update has been ongoing for about 6 months now. We are currently in the inventory collection phase and will present a working paper at the Open House at Tyee High School on July 23 from 4 to 8 p.m. We are currently at the inventory of existing conditions, including zoning, land use, comprehensive plans, etc. The working paper is just that: it is only a working paper, so it will be changed. We anticipate comments especially from the technical advisory committee, e.g. on zoning issues. The working paper will be unbound, in 3-hole punch format for binders. It will also be available at the Open House on July 23 and at committee meetings. The first round of noise monitoring data will also be released soon. We will send out a letter in the next week or so asking for input as to how you would like to see the data presented.

Claire Barrett introduces speakers (Bob Johnson, Roy Fuhrman, Metropolitan Aircraft Sound Abatement Council (MASAC), Minneapolis-St. Paul International Airport (MSP)) and gives background for the meeting. This meeting has come about because the committees asked for information about other communities' experiences, successes and challenges with the Part 150 process. Minneapolis-St. Paul was selected because of similarities to the Seattle area experiences. The Noise Office and representatives of the Minneapolis-St. Paul Metropolitan Airports Commission have a long-standing good relationship with their communities including an active public participation program through the Metropolitan Aircraft Sound Abatement Council (MASAC), created in 1969. MSP also is surrounded by noise sensitive areas, with a high public interest and sensitivity, has an extensive noise mitigation program. MSP is also just nearing the end of an extensive planning process which weighed the dual options of constructing another airport or expanding MSP. The decision was to expand MSP in its current location.

Bob Johnson (BJ): We have been in the aviation business for 45 years now, and we have been residents of the airport community for over 50 years. We are well aware of noise problems. I am the current chair of MASAC. This presentation will review what the MASAC has done with its residential sound insulation program.

Roy Fuhrman (RF): (Gives background on airport.) I am manager of the Aviation Noise and Satellites Office. MSP is actually a system of airports: MSP, the primary airport, and six general aviation airports. The St. Paul Airport is dedicated to corporate traffic. (Shows map, aerial photo). There are two parallel runways, NW and SE. The longest parallel is the south parallel; a crossway runway was extended last year. We are currently reconstructing some runways. For 7 to 8 years the communities went through a process to consider the possibility of expansion of MSP or construction of a new airport. Various sites for a new airport were considered, from seven miles to downtown centers; next to first tier suburb, Richfield, also St. Paul, Mendota Heights, Bloomington, etc.; all of these were full of high density residential areas on 3 sides. The question was how to accommodate the demands of passengers and keep noise down. We have been constrained by roads, rivers and cemeteries. After 7 years of process planning, we looked at the questions of site alternate. Additional locations were reviewed, finally the State Legislature said they would stay at current site and expand and upgrade, remaining until 2020 and probably to 2050.

We have seen an 8-10 percent increase in use of the Airport. We went through the Part 150 process in 1982, and let the community decide what mitigation measures they wanted. In the midst of a dual-track planning process, some wanted insulation, others (such as Richfield) asked MASAC to purchase their land and have now moved out. MASAC leased land for a golf course to the city of Richfield, and now the airport is trying to reclaim the land for expansion.

During this 7-year process, the Airport didn't make any improvements, then when it was done, they had to pursue significant improvements, such as reconstruction and extensions. By 2003, we will need a new north/south runway. We can increase capacity; but there is a problem to the south. The Mall of America is close by, and we had to move air traffic slightly away from the Mall. We have been trying to relocate some businesses, which is a \$1.7 billion project – actually fairly inexpensive.

Another expense is sound insulation and environmental impacts. We had heavy residential use surrounding the Airport. We do have a corridor that extends out to 3 miles on which we run most traffic, but because of the way the runways are oriented, we still have noise. We have had to head operations (like a two-way road) during the late night. This allows aircraft to both take off and land over the most desirable corridor when traffic is very light.

There are many challenges to implementing the Part 150 recommendations. We set up a policy advisory committee that includes cities and government agencies. Land-use planning is usually administered by cities. We installed the Airport Noise and Operations Monitoring System (ANOMS) as a way to determine impacts and correlate noise events to flight tracks, and post the data on our internet site (<http://www.macavsat.org/>). We have Graphic Information System (GIS), Global Positioning System (GPS), and ANOMS reports. This information is not necessarily Part 150-related, but it help people understand airport operations as a whole.

**Question: This sounds neat, but what do people do with the information?**

RF: People call and request the information, and they can do the evaluation themselves.

**Question: Are distances and heights measured or estimated?**

RF: They are actual radar data. The system interpolates aircraft address into latitude and longitude and creates the point of closest approach. The system connects the points to get the altitude and distance. Some information is filtered out for national security purposes.

There is an effort underway to reduce stage 2 aircraft. The communities have a lot to gain in the next year and a half as stage 2 aircraft are phased out. We will see the biggest contour shrinkage that will ever take place. We are using the 1996 contour for Part 150, which maintains the contour out to the largest area possible. Some communities want an update, but we remind them that the Part 150 contour will change. We are insulating about 10,000 homes now. According to the legislature, we will also insulate to 2005 DNL 60 contour. We will do this because it is a little larger than the current 65 DNL contour. We may not get full cooperation from the FAA on all of this.

**Question: Who has political control?**

RF: MASAC reports to the State Legislature. It was formed in 1943 to administer aviation assets in the metropolitan area. We have a body of commissioners, which are 15 people appointed by the governor.

**Question: How will the 65 contour shrink in terms of square miles?**

RF: It will get down to 20,000 people. It would be something like a change of 7-8,000 people. In 2005, we are anticipating seeing a 3.5 to 4.5 DNL reduction.

RF: Now I will hand things over to Bob.

BJ: (Starting with overhead)

**Slide: Part 150 rules and regulations:**

- FAA Part 150 regulations
- MAC Part 150 policies
- MN state law
- City code regulations
- Acoustic standards

When the Part 150 process was set up, the decision was to go on a house-by-house system. There would be unique acoustical designs. For example, by the airport there is a designated historical district, and we work with historical society on mitigation measures. We must leave the houses exactly as we found it. These homes are 60-80 years old with unique trim, stains, and paint.

**Slide: Unique Program elements:**

House-by-house system  
Unique acoustical designs  
5-decibel reduction package  
Air conditioning modifications (or furnace)  
Can pick contractor of choice (between 3)  
Product style choices (types of doors, windows)

Representatives in the policy group were often called upon by constituents regarding rules on what contractors could do. We had to make adjustments, and keep a strict hold on contractors. We had an incident where 3 contractors were fixing bids. Federal money was involved so the FBI and others became involved, and the contractors were charged and pled guilty.

**Slide: 3 dimensions of noise abatement:**

Noise programs that relate to the source  
Stage 2 aircraft engine hush-kits and replacements  
Introduction of Stage 3  
Noise programs that relate to the Pathway  
Noise abatement arrival and departure procedures  
Preferential runway system  
Noise programs that relate to the Receiver  
Acquisition and relocation program  
Sound insulation

Question: Who initiated the process?. What can come out of our program that is within the jurisdictional authority of SeaTac Airport to implement?

BJ: We had to work with the FAA on several items, but many issues just involve the airlines.

Question: You said hush-kits were "an airline thing." What does that mean?

RF: We need to seek their cooperation for implementation.

BJ: We had suggestions that the MAC should give airlines funds to encourage them to buy new aircraft or hush-kits, but that was rejected as expensive and inappropriate for tax money to subsidize a private enterprise.

Question: How is the MAC funded?

BF: We are self-funded through landing fees, fees levied on carriers, and some funds from the federal government for Part 150. There is no taxation. The committee has the legal ability to levy taxes on both Minneapolis and St. Paul, but it has never done. So MAC just floated \$400 million in revenue bonds to cover part of a construction project.

We have not done anything out of the 60-65 DNL area. We asked communities what they wanted done, and all except one said we should insulate those homes where they are suffering the most. Minneapolis elected to go to a lottery program, so people who were not in the direct path of flights were getting insulation. There was a great deal of political flak, and finally the city decided they would do it like everyone else – noisiest first.

RF: With acoustic field monitoring, we do inside monitoring before and after insulation. It's an individual choice to do the monitoring. We place 3 inside mikes, and one outside.

**Slide: Acoustic monitoring results**

House type: wood structure, 1 story, Minneapolis, Part 150 program reduction: +6.6 dB

**Slide: FAA Part 150 program rules:**

FAA introduced Part 150 program options in the early 80's.  
Part 150 is a federal program, which is subject to federal rules and regulations.  
By design, FAA establishes many of the program rules, including eligibility using the dnl noise contour.  
The FAA office in Minneapolis has been good in working with MAC.

**Slide: estimated remaining residential sound insulation workscope 1998-2009, table**

BF: The cost is about \$30,000 a home. This includes not just insulation but air conditioning and possibly a new furnace. Many older homes have dozens of windows, and it is very expensive. There are many homes built in the 20s and 30s.

RF: AIP funding continues to go down. This slows down the process. When we first started, there was a \$25,000 cap, but this has been escalating ever since. The contractors bid on the project, a consultant assesses, and then a contractor bids.

Question: Are there municipal constraints on new construction?

RF: The area around the airport is a well-developed community. There is not really new development potential. Community codes do have requirements for development within the contours.



BF: Here is a slide showing a map of homes within the contour that have and have not been done.

Slide re completed home numbers, totals: 3,559 completed, 666 in construction.

Question: What about easements?

RF: With GIS, there is a contour assigned to each block. In the agreement, if your specific location results in a 2-DNL increase, the contract is void and can receive additional mitigation. It is not an easement but an agreement. There was concern regarding the easement staying with the deed. The agreement will be passed onto the next owner. We look at the property as a single entity, instead of using the homeowner. This protects against having the new owner upset with the previous owner's agreement. It was a community decision to call it an agreement.

Question: How are these agreements recorded?

RF: They are kept on file with the MAC. There is no required disclosure to a new buyer. The agreement basically absolves the MAC from future liability.

Question: What are the prices of homes that have been insulated versus those that have not?

RF: We don't have areas of decreasing value. The insulation comes out of the sale value of homes. It has helped to escalate the value of adjacent properties as well.

BF: Values for homes that would be considered more heavily impacted by noise increased more than those in other parts of city unaffected by noise.

Question: What percent of people were eligible for insulation?

RF: Some people will decide to not participate, then come back later and join in. The biggest reason people don't participate (the goal is a 5-decibel reduction) is that some may have bought new doors and windows and don't want them replaced even if they do want new air conditioning. They need to take all or nothing.

Question: How do you measure a 5-decibel reduction?

RF: We use different labs to do the testing. We have two full-time consultants who do nothing but monitoring. There is a remote control to turn on and off all of the monitors. This is important because long duration monitoring can throw off results.

A low-frequency issue is surfacing more with communities on the west of airport. They are going through a ground noise study, and are not through with the analysis. They did monitoring in completed homes.

We are looking at acoustical walls. The airlines' concern is maintenance time between 12-5 a.m. It is becoming more and more important to airlines to have 24-hr maintenance. The possibility of acoustical walls is in its infancy. We'll have to look into the impact on the community. The closest community is Richfield.

Question: Are there night restrictions?

RF: There are voluntary night-use restrictions. We didn't pursue Part 161 because of interstate commerce issues. In 16 months, we went from 30% Stage 3 to 50% Stage 3 during nighttime. This has worked well. Other airports don't have cargo planes other than twin engine.

Question: Is Minneapolis/St. Paul Airport (MSP) the only airport that does commercial carriers?

BF: Yes, and there is no training allowed at MSP. The other airports do all other types. There are 500,000 operations a year at Minneapolis/St. Paul Airport, and close to a million at all the others combined. The second biggest operations are out of downtown St. Paul.

RF: MSP acts as a hub. Out of 32 million passengers, 2/3 are connecting. MSP is the Northwest Airlines hub.

**Slide: Program funding**

Only airport and airline generated funds are used for Part 150.  
No income, general or property taxes are used.

BJ: Air conditioning package slide:

RF: The Minneapolis *Star and Tribune* ran an article about air infiltration, suggesting we were killing people from carbon monoxide.

**Slide: Ventilation Standards Committee**

The MAC commission established the Part 150 ventilation committee in October of 1996. The MAC committee established vent and safety standards in April of 1997, and using these standards, the MAC evaluated 944 homes.

Most problems were due to pre-existing vent failures. Now a home must pass standard tests before insulation. Residents have 70 days to fix pre-existing problems.

**Slide: Part 150 pre test standards:**

CO<sup>2</sup> standard

**Slide: Common Venting and Ventilation Deficiencies:**

**Slide: Remediation Costs re: failures:**

Average \$449

Question: What is house tightness?

RF: We look at leaks through windows, chimneys, etc. We can often caulk these areas. We may need to draw in additional air. The correction is air-to-air exchanges, cold-air return.

BF: Of five people who were quoted as saying we had done something dangerous, all five were active in noise protest groups. In the end, we were able to go into homes and tell people there was a pre-existing problem.

RF: We also gave a CO<sup>2</sup>-monitoring device to homeowners.

RF: The noise complaints generally increase in May when open window season starts.

Question: How necessary is air conditioning in the area?

RF: We see at least one week of summer where it is 90 degrees and have a lot of humidity. People without air conditioning have more complaints. The FAA ultimately agreed that air conditioning and new furnaces were necessary. People would have to close their windows to meet the standards.

Question: Do most homes have air conditioning?

RF: The newer ones do. Those built up to the 40s, 50s, or 60s don't.

Question: After the study, was there a change to flight paths?

RF: Yes, we are now using the corridor mentioned earlier and the preferential runway use system is operating on parallels.

Question: Why did the FAA reject out of hand the suggestion about rerouting of traffic?

RF: This was based on amount of activity and the additional information needed. There was not enough of a push from the community to support it. All these communities have specific issues of concern. When there is no support from Richfield or Bloomington, they don't get support from the FAA.

Question: What about noise abatement departure procedures?

RF: There is a close-in and a distant standard. We looked at the communities and by default, we are flying distant procedures. We went through with GIS and with contours on all the runways, took population counts, and took it to MASAC's operations committee, and the distant provided the most benefit off of particular runways. We made the recommendation, and the only dissenting community was Mendota Heights. We need to continue to evaluate this.

Question: What is the difference between the NAEP procedure or standard?

RF: In 1988, we had 24-hour noise complaints. We hit almost 30,000 complaints in a year. We tried to use complaints as an indicator because monitoring was not in place. When ANOMS was in place, we found that one person who lived 9.5 miles away had made 682 complaints in one month. Some people very close made no complaints.

BJ: Now we have three people on the complaint line as well as an automated system to leave complaints.

**Slide: 9-month Timeline**

- 1 mo. home inspection visit
- 2 mos. completion of acoustic design, design review meeting, signing of work agreement contract, contract SEL, bid package distribution
- 3-4 mos. bid opening, MAC commission.

**Slide: Part 150 post test procedure**

- Vent pressure
- Vent spillage
- House tightness

**Slides:**

**5-decibel reduction package product warranties**

**Non-acoustical upgrades**

**Non-eligible modifications**

**Part 150 limitations**

**Part 150 homeowner opinion survey**

Question: As a member of the CAC, looking at my influence in what happens at SeaTac, what degree of influence should we expect or not expect to have over a desired result? Realizing there are limitations, as we begin this process, give us guidelines on what we can expect.

**RF:**

**Slide:** Sound Basics: What Can be Done

Quiet jet engines	Stage II phase-out (fed)
Move the airport	Aviation planning bill 1989 (state)
Adjust flight tracks	RUS and beyond (local)
Sound insulate	Part 150 (Federal)
Next generation	ANOMS, GIS, GPS (local) technology

Question: Many of these things will happen without the involvement of the CAC, so what should this group expect is unrealistic to achieve, and what is one piece you would have added?

RJ: You need to take this in the right context. At MASAC, we can get very proprietary in the communities, and can get locked into that. If people only focus on what is best for my back yard, things get stuck. We need to widen that. We can't shut the airport down. We need to accommodate the demand, and approach it as a given that there will be increases. From then we need to decide how to best deal with noise.

We are encouraged by the noise abatement potential of GPS. This is an unknown quantity for many people, but it could offer very significant benefits in keeping aircraft on approved flight tracks.

**Slide:** MSP's next steps

Promote airborne implementation of DGPS capabilities

Identify GPS benefits for Part 150 study updates  
Define MSP's airspace opportunities  
Promote airport perspective for GPS implementation and utilization

We will encourage community groups to get behind this and work with the FAA, airlines, and others.

Comment: I was expecting to hear "citizen." We heard little sympathy for residents regarding noise. Residents were referred to as "they" and the solution seemed to be to insulate and keep them shut up so can't enjoy the out-of-doors. Also, if you are having a hard time getting airlines to switch to Stage 3, how will you get them to get behind Digital GPS?

BJ: If I had no sympathy for residents, I wouldn't have done this for so long. I have lived in the area for over 50 years. We are not trying to lock people in their homes. We are trying to make the homes quiet when they want them quiet. When MASAC first started, there were many things they did immediately, then the opportunity to make changes became more limited. GPS is one of few things that has come along in recent times that offers an opportunity to do something dramatic about the problem.

RF: If I may address the second comment. MSP has a base station installed that serves six runways for \$350,000. An ILS single end is \$1.2 million. The best thing aircraft can have is an FMS (flight management system). You need to feed that information into existing instrumentation in the cockpit.

Discussion followed regarding ILS/GPS/precision approaches.

MASAC consists of 19 community members and 19 industry members. The industries are all airlines, including cargo carriers and the military. Community members are grouped according to a new formula so the city of Minneapolis has 6 representatives, Mendota Heights and Eagan have 2 each, St. Paul has 1, and other suburbs have 1 or 2. When it was originally set up, the municipalities were the ones that bordered the airport. That has changed as groups further away have asked for representation. The requirement on the bylaws is that there be a balance between communities and industry. One problem is trying to get some airlines to participate in that Minneapolis is the Northwest Airlines hub. In the last 6-8 months, though, we've been seeing more participation and enthusiasm among the group.

MASAC was set up in 1969 as a private corporation whose duty it is to advise the airport commission. It answers to itself. MASAC recommendations go to the planning and zoning committee. I don't recall a MASAC recommendation that has not been supported.

RF: As far as schools, we have done 12 schools. It started at \$215,000 per school. Now we average \$2 million per school. Noise is monitored in schools. Most schools date about the same time as many houses in the area. We monitor noise between students and the teacher and then monitor a plane event. The biggest thing we found is that acoustic treatments like carpet and ceiling tile do the most for noise reduction. We also replaced some windows. Air conditioning and heating systems are the focus currently.

BJ: When the school insulation program started, we had MNDOT funds. Since then, we have used mostly grant money. The total amount between 1981-88 is just over \$28 million. In the 65

contour, there are 18 schools. We are not looking at schools outside the 65 contour. A study found that a community event wasn't hindered by planes, but rather more by other noise produced in the school.

Question: What is the motivation of the MAC? Why did the MAC go on to pressure the FAA for air conditioning, as well as other occasions where you went beyond what I'm used to? You're not elected.

RF: We have a dual charter as set out by the legislature: to support travel and minimize the impact on community. To fulfill both sides, we need to pursue both sides. We are in critical times, and we have an opportunity to affect the establishment of FAA regulations,

Question: What is your relationship with the community like?

RF: We are being sued by Richfield. They said the EIS was inadequate. With other communities, it is a love/hate relationship. There is lots of money coming out of the airport, and that money is a significant part of the area tax base. We have a workable relationship with others, and we have solid people who we work with.

BJ: We have a new, better attitude in MASAC because the community has replaced some members recently.

Question: On the head-to-head operations, is there a wind speed limit at night?

RF: There is usually a 7-8 mph wind speed.

The runways are 3,400 feet apart

Question: Are you insulating any hospitals?

RF: No.

Question: What omissions did you make during the Part 150 study?

BJ: I was only chair for 3 years, but I am sorry that the group as a whole did not come forward and talk to the communities who were not being well represented. It is a very diverse group.

Question: How can we deal with economic constraints? What insight do you have to help us deal with recognizing how far is too far?

BJ: I hate to fall back on common sense, but you need to look at particular projects and prioritize. We have found that once you get past the initial territoriality to looking for what is best for everybody, often common sense about the dollars follows.

RJ: You need to clearly define what you want to accomplish.

Question: How do you vote?

BJ: We have two standing committees, executive and operations. Proposals or suggestions go first to the operating committee then to MASAC. Voting is by simple majority. Over a period of a year, we maybe have six votes.



## Sea-Tac Part 150 Noise Study

### Minutes of the Citizens' Advisory Committee

SeaTac International Airport, July 22nd, 1998

#### Initial Review of Noise Monitoring Data

Present: Mike Anderson (King County District #8); Guy Spencer (Normandy Park); Richard Kennedy (Des Moines); Bob Rudolph (Eastside); Rose Clark (Burien); Arden Forrey (King County District #2); Jim Combs (City of Seattle); Joanne Schaut (City of Kent); Nancy Cleminshaw (King County Council District #4); Bud Jones (City of Sea Tac); Al Furney (KC Dist. #13); Bob Wells (Port of Seattle, AV/Planning); Steve Mullet (Tukwila); Ron Seymour (Port of Seattle); Lynae Jacobson (Port of Seattle); Chip Doring (King County District #5); Consultant Team: Ryk Dunkelberg (Barnard Dunkelberg & Co.); Bob Barnard (Barnard Dunkelberg & Co.); Paul Dunholter (BridgeNet Consulting); Mary Vigilante (Synergy Consultants); Claire Barrett (Claire Barrett & Associates); Leigh Hughes (BridgeNet); Michael West (Pacific Rim Resources)

Ryk Dunkelberg: Introductions. This is the first meeting to discuss preliminary noise monitoring findings. Working Paper No. 1 has been distributed and comments will be taken for two weeks. The preliminary noise monitoring results will be presented first. We would also like to remind everyone that the Open House is tomorrow, July 23. This meeting will follow with a discussion of what's next in the process. The end of the meeting will be reserved for committee comments and question-and-answer.

*CAC Member Email addresses of CAC members should be recorded. Comments could be collected this way and meeting agendas as well as summaries could be circulated electronically.*

[A sign up sheet was circulated and CAC member e-mail addresses noted. It was noted that those with no email address would need to have hard copy mailed to them.]

*CAC Member Draft working papers should be line numbered to make them easier to comment.*

Ryk agreed it was a good idea and he would try to do this in the future.

*CAC Member Why is that section of runway shown in red?*

The section of the runway shown in red is a proposed taxiway.

*CAC Member What General Aviation-type operations fly out of Sea-Tac?*

The majority are corporate/business jets such as those used by Weyerhaeuser.

*CAC Member How many passengers are terminating their trips at SeaTac?*

We don't have an exact number, but we do know that the majority of all passengers at SeaTac are Origin & Destination (O & D) passengers, that is, people either coming from or going to Seattle, not transferring planes.

*CAC Member Please add "O & D" to the glossary.*

Dunkelberg briefly described the basic air traffic patterns at SeaTac, including North and South flows. ("North flow" means that aircraft are landing and taking off to the north; conversely, "south flow" means that aircraft land and take off to the south.) He also described IFR (Instrument Flight Rules) and VFR (Visual Flight Rules) conditions. He highlighted the complexities of sharing airspace with neighboring King County International Airport (KCIA or Boeing Field), including protecting pathways for missed approaches and integrating arrival streams over Elliot Bay.

*CAC Member What is "Center"? Please add to glossary.*

The Center is the air-traffic controller who guides the flight from originating TRACON to destination TRACON. Center is responsible for the "en-route" portion of the flight.

*CAC Member What are IFR and VFR conditions and who defines them?*

"IFR" refers to "Instrument Flight Rules"; "VFR" stand for "Visual Flight Rules." [see glossary]. The FAA defines the conditions; however, they vary from airport to airport.

*CAC Member What is the status of "free flight" and what effect would it have on arrival and departure times? Would it affect flight capacity?*

"Free flight" is still in the discussion stage. It's not certain how free flight would affect arrival and departure times or capacity. Free flight would still require extensive sequencing of flight plans and control of aircraft within the Terminal Control Areas around major airports.

Paul Dunholter of BridgeNet Consulting analyzed noise complaint data from 1996 to the first quarter of 1998 and answered questions from the committee:

*Why did people call?*

Too loud, nighttime operations, planes perceived to be flying too low or off track.

*How often did people call?*

The majority only called once, however one King County resident phoned 349 times.

*CAC Member It would be helpful to see the geographic location of complaint*

*Callers and the distribution of one-time callers.*

*CAC Member A follow-up survey of complaint callers should be made to determine if the caller's issue was resolved.*

*What day of the week were they most likely to call?*

Day of the week was not a factor; calls were generally evenly distributed over the week.

*What hour of the day did they call?*

The periods from 7-8 a.m. and 9-10 p.m. had the highest volume of calls.

*CAC Member It would be easier to read this data if presented in a bar graph.*

*CAC Member A table or graph which links geographic location to the complaint call would be helpful.*

Yes, that data is recorded with every call.

This data helps us understand what is important to people, so noise abatement programs can be tailored to address those issues.

*CAC Member When does the Sea-Tac Noise Abatement Committee (SNAC) meet?*

It is an evening meeting held quarterly on the third Thursday of the month. The next meeting is scheduled for September 17<sup>th</sup>.

*CAC Member Was a sunset date set for the SNAC Committee? If so, what would replace it? We should discuss what will replace it.*

Mediation was set up to run from 1991 to 2001, so the sunset date for the SNAC would be 2001. We might want to consider a committee developed from this Part 150 Study that would be in place to implement decisions made by SNAC.

*CAC Member The airport map shows a maintenance facility; does the map show a hush facility?*

The SASA (South Aviation Support Area) Plan identified a hush facility and located it at the north end of the runway; the Master Plan also calls for a hush facility, but its location has not yet been determined.

*CAC Member How many Stage 2 aircraft over 75,000 pounds will be eliminated by the year 2000?*

All Stage 2 aircraft over 75,000 pounds will be eliminated by the year 2000; However, there will still be some Stage 2 aircraft under 75,000 pounds that will still be in service. These are business jets and Horizon Airlines F-28s. The F-28s are being phased out gradually, but there will still be some in service in 2000. We expect that by the year 2000 95% of all aircraft operating in and out of SeaTac will be Stage 3 aircraft; that will leave 5% of the aircraft as Stage 2.

*CAC Member What is GPS? Please add it to glossary.*

"GPS" refers to "Global Positioning System". It is a system whereby anyone including pilots can know their exact location from satellite information.

*CAC Member How does GPS differ from FMS [Flight Management Systems]?*

GPS registers the exact position of the aircraft relative to the ground. Currently, the pilot is susceptible to drift and time delays between the time an instruction is given by the tower and the execution of that instruction.

CAC Member *Are the new planes being equipped with FMS?*

Not all new planes are equipped with FMS. It is left to the airline's discretion.

CAC Member *Are there no standards for land use?*

No.

CAC Member *It would be helpful to create a table defining Part 150 land use categories and then columns depicting local land use categories from cities in the effected area (i.e., Tukwila).*

CAC Member *What is Tiger Line data?*

Tiger Line data refers to Census Bureau information.

CAC Member *The base maps are lacking some of the streets.*

Paul Dunholter continued with background on the Noise Monitoring System (NMS):

The NMS consists of 25 sites made up of permanent, semi-permanent (1 week, 4 times/year), and temporary (1 day) monitoring sites.

Noise levels are measured in 1-second increments.

The Airport's permanent noise monitoring equipment continually tracks noise levels, but it doesn't correlate that data with flight information. For this survey, the two have been linked to determine which planes are causing noise and at what times. Not surprisingly, older planes make the most noise. DC-8s and Boeing 727s are consistently the loudest aircraft (these are Stage 2 aircraft).

CAC Member *It would be helpful to have a graph that directly ties noise to the specific airlines that are creating it.*

Noise levels are also correlated with radar information from the tower. By analyzing flight altitude, we can determine which flights fly lowest for the longest period of time and create the most noise. An example would be the difference between a plane flying to California and one to Japan. The California-bound plane climbs quickly on its flight path and makes less noise. The flight to Japan is fully loaded with fuel and therefore takes a more gradual ascent. Its flight path means the Japanese flight will produce more noise. These factors can be weighed when planning departure schedules.

Public Access for Noise monitoring Information

The public can access the information on-line at [www.airportnetwork.com/sea](http://www.airportnetwork.com/sea). This will bring them to the homepage for the Sea-Tac Part 150 Noise Study. After selecting data, people can choose a location from a map of monitoring sites and then which type of report they would like to see from that site.

#### Open House Announcement

Claire Barrett noted that committee members are invited to attend the open house to be held at Tye High School, on July 23 from 4 p.m. until 8 p.m. The goal of the open house is to present the inventory chapter and monitoring results from the first round. It will be informal, with displays of maps and graphics from the working paper. Comments will be taken from the public and a summary of public feedback from the last open house will be on display.

#### What's next/Other business:

Claire Barrett continued, noting that three sub-committees will be formed to address subject areas listed below. Committees will present their issues to the entire Citizens' Advisory Committee for discussion. As the sub-committees evolve, they will meet regularly, perhaps monthly and with the CAC and TAC as needed.

#### Sub-Committees and areas of emphasis:

##### Operations:

Adherence to flight tracks, ground noise, flight quiet program, fleet mix, noise budget, overlaps between Sea-Tac and Boeing Field, operations restrictions, preferential runway use.

##### Land Use:

Noise remedy program (blend the existing program with an extended one based on new boundaries and noise contours), insure compatibility between noise remedy program and local comprehensive plans, work with other institutions which may have jurisdiction over different areas (i.e. FAA)

##### Data:

How to translate complex data into easily to understand information for the public, noise monitoring, model inputs, forecasts

#### Upcoming Events (exact dates to be determined)

##### September

First meeting of the Data sub-committee

Joint meeting of TAC and CAC

##### October

First meeting for Operations and Land use sub-committees

**November**

Joint meeting of TAC and CAC

Open House to review refined summer noise data

**December**

All sub-committees meet

CAC Member *How do CAC members join sub-committees?*

A signup sheet will be mailed to committee members listing the sub-committees and the issues addressed by each sub-committee. Individuals may sign up for more than one sub-committee.

[A sign-up sheet was circulated and members chose one or more subcommittees.]

Other suggested additions to glossary:

Air Taxi Non-scheduled passenger aircraft with 50 or fewer seats

ALP Airport Layout Plan

ARTCC or Center Air Route Traffic Control Center, where the controller guides the flight from originating TRACON to destination TRACON [see TRACON below]. Responsible for "en route" portion of flight.

ATA Airport Traffic Area

ATC Air Traffic Control

Center Air-traffic controller who guides the flight from originating TRACON to destination TRACON. Responsible for "en route" portion of flight.

Commuter Aircraft Scheduled passenger aircraft with fewer than 50 seats

FMS Flight Management System. Refers to a computer installed on board the aircraft to aid in navigation. Installation is not mandatory but at the airlines' discretion.

General Aviation Non-commercial airline aviation. Primarily business aircraft and individuals traveling in private aircraft, including those making connection to commercial flights.

GIS Geographic Information System

GPS Global Positioning System. Satellite-based information system capable of informing the public and pilots of their exact location.

Hush Facility A structure designed to deaden or absorb the noise from testing aircraft engines. All engines must be fully tested after being maintained and re-installed.

OAG Official Airline Guide

O & D Passengers Passengers whose flight originates at airport or whose final destination is the airport (Origin & Destination)

TRACON Terminal Area Approach Control, where air traffic controllers direct aircraft in flight.

SNAC Sea-Tac Noise Abatement Committee

SASA Plan South Aviation Support Area Plan. Area located on southeast portion of Sea-Tac Airport that is planned for use by cargo, maintenance and support.

**Sea-Tac Part 150 Study  
Joint Meeting of the  
Citizens' Advisory Committee and the  
Technical Advisory Committee  
December 1st, 1999  
Minutes**

***Attendees:***

**Committee Members:** Duane Anderson, Mike Rees, Guy Spencer, Arden Forrey, Rose Clark, Dick Haferbecker, Mike Rees (for Betty Ivie), Dr. Robert Rudolph, Bud Jones, Loyce Saar, Craig Ward, Mike Ranta (for Jules Bloomenthal), Doug Hakala

**FAA, Air Traffic Control:** Suzanne Alexander, Cayla Morgan

**Port of Seattle Staff:** Ron Seymour, Bob Wells, Lynae Jacobson, Stan Shepherd, and Rob Kikillus

**Consultant Team:** Ryk Dunkelberg, Paul Dunholter, Claire Barrett, Mary Vigilante, and Michael West.

Members of the public.

**Handouts:** Agenda, "Land Use Recommendations Summary", "Summary of Flight Track Alternatives", Glossary of Common Acoustic and Aviation Terms and a letter outlining Port Resolution 3257 (Mobile Homes).

Ron Seymour called the meeting to order and welcomed attendees. The purpose of the evening's meeting was to present the results of recent subcommittee and consultant activities to the full CAC and TAC. Ron gave a brief overview of the Part 150 process for those members of the audience who had recently joined the study. He noted that the consultant team's recent activities had been in response to subcommittee requests for more information. He emphasized specifically that the purpose of the evening's meeting was to present the results of this data collection and analysis, rather than to make recommendations as to changes in procedures or aircraft operations.

He then turned the meeting over to consultants Ryk Dunkelberg and Claire Barrett. They gave an overview of the evening's presentation and reiterated Seymour's comment that the consultant team was not making recommendations as to specific actions. Barrett mentioned that although considerable attention has been paid recently to the issue of flight tracks and possible alternatives to current procedures, other issues had also been considered by the subcommittees. These issues would be summarized before the issue of flight tracks is addressed.

Ryk Dunkelberg then gave a brief report on recent Land Use Subcommittee meetings and discussions.



## **Land Use Subcommittee Activities**

Issues considered by the Land Use Subcommittee included the relocation or buyout of mobile homes, sound insulation of multi-family housing structures, and the impact of Approach Transition Zones on land use. He referred committee members and members of the audience to the handout "Land Use Recommendations Summary" and some of the preliminary recommendations made by the subcommittee and the consultants. Recommendations include:

### **Use of 1998 DNL Contour to Define the Noise Compatibility Program:**

The consultant team recommends the use of the Existing Base Case (1998) to define the Noise Compatibility Program (land use actions such as sound insulation). The Subcommittee recommends that as long as the Existing Base Case Contour contains the largest area within 65 DNL, it should be used. If that contour is not the largest, the Subcommittee recommends using whichever future contour is larger.

### **Multi-Family Structures**

The consultant team recommends that the Port sound attenuate, within the 70 DNL contour, owner occupied multi-family structures as a first priority, and then attenuate rental multi-family structures as a second priority. The Subcommittee recommends that no distinction be made between owner occupied and rental multi-family structures. The Subcommittee further recommended that the Port sound attenuate both owner occupied and rental multi-family structures on an equal basis, with priority given to highest noise levels.

### **Mobile Homes**

The consultant team and the Subcommittee agreed in their recommendation that all mobile home parks and units within the 1998 Baseline 70 DNL noise contour or greater be purchased and the residents relocated for an approximate cost of \$43,600,000. All mobile homes parks within the 65 to 70 DNL contour will be encouraged to convert the parks to noise compatible uses. The Port is currently developing criteria and guidelines to assist mobile homes parks within the existing 65 DNL noise contour to relocate to more compatible areas. The consulting team is recommending that the existing Part 150 policy be amended to increase the amount of relocation assistance allowed for mobile homes within the 65 to 70 DNL noise contour from \$6,000 to \$12,000 per mobile home under some circumstances as described in the newly adopted Port Resolution 3257. The cost to help relocate those units is estimated to be approximately \$10,250,000.

### **Change of Noise Remedy Boundary**

It appears that there are approximately 1,800 residences outside the existing Noise Remedy Boundary, which fall within the 1998 Baseline contour. It is estimated that the cost to sound attenuate these structures would be \$32 million. Both the consultant team and the Subcommittee recommend that the Noise

Remedy Boundary be expanded to include all single family homes inside the 1998 Baseline 65 DNL noise contour. The team noted that these homes would have to meet the same eligibility criteria and requirements as all of the other homes presently within the Noise Remedy Boundary.

### Approach Transition Zones

There are two approach transition zones associated with the new runway, one to the south and one to the north. There are approximately 153 single-family dwellings in the ATZs, representing a cost of approximately \$23 million to purchase. There are also 6 apartment buildings containing 32 units for an approximate cost of \$5 million.

The consultant team recommends that residential uses within the Approach Transition Zone be purchased, based on the achievement of specific criteria:

1. The jurisdiction agrees to re-zone the property for re-development to a compatible use (primarily commercial);
2. The residents of the area generally agree to the purchase; and
3. The residential structures experience noise levels of some magnitude based on terrain and aircraft approach altitude.

The cities of Burien and SeaTac, in consultation with the Port, will prepare redevelopment plans for the areas consistent with both community and Port goals. The subcommittee generally agreed with the consultant team recommendations, but also noted that fair market value for residential properties should be assured.

### Estimated Cost of Land Use Recommendations

The estimated cost for the Land Use Recommendations as presented by the Consultant, including sound attenuation of rental multi-family units, was estimated to be approximately \$119.3 million.

### Committee Member Questions and Comments

Arden Forrey noted that in the discussion of Approach Transition Zones, there should be some attention paid to the loss of assessed property value.

Guy Spencer stated that the compensation range for mobile home owners from \$6,000 to \$12,000 was too low, as it would be less than full market value.

Cayla Morgan of the FAA noted that the agency would have to review the eligibility of this mobile home program for Airport Improvement Program (AIP) funds, because the program between 65 and 70 DNL would not be a full purchase. However, the program could be approved as part of the Noise Compatibility Program produced by the Part 150 Study, and, as such would be eligible for Passenger Facility Charge (PFC) funds.

Spencer further noted that the insulation of schools near the Airport was a high priority for many community members and should be part of the Part 150 program, not separate as is currently the case. Ron Seymour stated that while negotiations between the Port and neighboring school districts are ongoing, they are a separate process consistent with the wishes of the school district.

On the topic of schools, Rose Clark noted that while there was a representative from the Highline School District on the Technical Advisory Committee there was no Highline representative on the Citizens' Advisory Committee. She further noted that committee members had recommended Highline representation on the CAC. Dr. Robert Rudolph asked why there was no representative of the Highline School District on the Citizens' Advisory Council. Ron Seymour replied that the school district is represented on the TAC, as are all the business, government and institutional bodies. He also pointed out that several members of the CAC live in the Highline School District, so there was already considerable representation of the district on both committees.

Craig Ward noted the need for detailed maps for close communities in order to follow the land use analysis and consultant and subcommittee recommendations. Ron Seymour responded that the Port could provide GIS data to the communities, which can format it as needed for their local purposes.

Ward also noted the need for insulation at fire stations. He stated that even though these structures were not dwellings per se, they were still occupied on a 24-hour basis and that firefighters were obligated to sleep at the station as part of their job requirements.

### **Operations Subcommittee Activities**

Paul Dunholter then gave a report on recent meetings of the Operations Subcommittee. He reminded the audience that FAA regulations required the phase-out of Stage 2 aircraft over 75,000 pounds after Jan. 1<sup>st</sup>, 2000, but that aircraft under 75,000 pounds were exempt. This exemption has a direct consequence for Sea-Tac Airport because Horizon Airlines operates a considerable number of Fokker F-28s, which are Stage 2 aircraft under 75,000 pounds. He noted that Alaska Airlines (the parent company of Horizon Air) intends to gradually phase out its F-28 fleet in favor of much quieter Canadair Regional Jets (CRJs), but that the F-28 phase-out would not be completed until early 2006. The first delivery of CRJs is not scheduled to occur until August 2002. Accordingly, the consultants and subcommittee are recommending the voluntary suspension of all nighttime F-28 operations after 2003.

Dunholter and Barrett then followed with a discussion of national issues related to aviation and noise policy. Barrett noted that there is an international effort to develop a Stage 4 standard, and that U.S. government and airports are involved. The Port has representation through Burr Stewart on the Airports Council International environmental committee, which is following and commenting on the issue. Mary Vigilante and Barrett are also members of this committee. In answer to a question regarding a good source of

information about noise and national policy, Barrett recommended the Boeing website, which includes information on regulations at specific airports.

Dunholter continued with a discussion of "Fly Quiet Programs" and their probable implementation. He noted recent efforts to develop standards for measurements of compliance as well as development of incentive programs to reward pilots and airlines for voluntary compliance with Fly Quiet Programs.

Another issue taken up by the Operations Subcommittee was that of noise barriers. He summarized recent discussions of a proposed noise barrier at the northern end of the airfield and showed an aerial photo with noise contours both with and without noise barriers superimposed. Craig Ward asked to have a copy of the subcommittee report on noise barriers.

Mike Rees requested that all information and analysis be placed on the Part 150 website. Dunholter explained that placing all data and analysis on the website was unrealistic due to the great volume, but that the team would provide as much data as possible on the website.

Guy Spencer stated that strong incentives needed to be developed in order to encourage pilots to adopt Fly Quiet Programs. He said that he also wanted to be able to see specific data on which aircraft were not in compliance with these programs. Ron Seymour responded that the new monitoring system currently being installed would be able to provide this information within the next few months.

Arden Forrey stated that data from calls made to the noise complaint hotline was not a reliable indication of the impact of aircraft noise on various communities. Seymour concurred and said that that information was not used in analyzing community noise impacts.

Mary Vigilante then summarized recent discussions and requests for more data on flight tracks and referred committee and audience members to the handout "Summary of Flight Alternatives." The alternatives analyzed in this document refer to two different take-off procedures, one for a possible split east turn for northbound departures, the other for redistributed southbound departures.

Several committee and audience members voiced opinions about another alternative take-off procedure, one that would use the Duwamish corridor and Elliott Bay for north flow departures, making a turn to the northwest rather than to the east. Suzanne Alexander of the FAA summarized previous explanations of why it was not possible to re-route all of the north flow traffic that currently turns east. Even though this procedure was in effect several years ago, subsequent increases in air traffic have made it impossible to increase the use of the Duwamish/Elliott Bay procedure.

Alexander further noted the complexity of air traffic control issues in re-routing traffic over the Duwamish corridor. She explained that this corridor is part of an air traffic control

system that extends from Alaska down the western U.S. coast. In particular, the problem has to do with the crossover of aircraft near Eugene/Medford, Oregon. As a result of this complexity, the decision to increase the use of the Duwamish would be beyond her authority.

Because of the jurisdictional and regulatory complexities involved in changing this airspace, care needs to be taken to provide time for ample consultation and cooperation among the various FAA regions and jurisdictions. Suzanne Alexander noted the high priority given to safety and the efficient and timely operations of aircraft across the country. Procedures that compromised safety, or increased delays would not receive favorable consideration by the FAA. She noted that this was a national policy, not regional.

Ron Seymour explained that approximately 40% of the SUMMA Sea-Tac traffic departures are bound for the Los Angeles area, served by the airports Los Angeles International, Burbank-Glendale-Pasadena, Orange County, Ontario, San Diego and Palm Springs. While it might be possible to re-route some air traffic to these airports through the Duwamish corridor, it would not be possible to re-route all Sea-Tac departures that way. Suzanne Alexander concurred and noted that even within the Puget Sound region, air traffic included more than activity from Sea-Tac airport. She noted other local airports, including Renton, Paine Field and King County International Airport, contributed to regional air traffic.

The Port is aware of the complexity of this problem, and is drafting a letter to the FAA requesting a coordinated effort among the regions and headquarters to affect a possible increase in the number of operations along the Duwamish corridor. Several Committee members encouraged a strong advocacy effort on the part of the Port and urged that the letter be sent promptly.

Barrett then reviewed the remaining schedule and the process for producing Study recommendations. She stated that the collection and analysis of data will reach a conclusion early in 2000 in order to allow committee members time to process the information and formulate recommendations. She noted that currently there were four more Subcommittee meetings scheduled – two each for both the Land Use and Operations. By the end of February, the Subcommittees would take positions and make recommendations to the full CAC/TAC at a meeting tentatively scheduled for late March.

A summary of the discussion at that CAC/TAC meeting will be prepared by the consultant and will be circulated to the membership for their review. The CAC/TAC would then make their own recommendations to Port staff, which will consider this information when making its recommendations to the Port Commission. After taking into account the Committee, staff, and public's view, as expressed at the Public Hearing, the Port Commission will then make its recommendations to the FAA.

In response to a schedule question, Barrett noted that changing deadlines by a month or so will still not make a significant difference to the Study. She emphasized that the

possible revision of flight tracks would require FAA to conduct additional environmental analysis, which would take considerable time.

Dr. Robert Rudolph then circulated a handout entitled "An Analysis of the Port of Seattle Noise Compatibility Study Consultant's Report Regarding Noise Impacts of a Split vs. the Current Single East Turn Procedure." He had distributed an earlier version of the document to the Operations Subcommittee at the November meeting. The current version incorporated revisions, including analysis of data for points around Sea-Tac Airport that had not been included in the previous version of the document. Rudolph's presentation highlighted the benefits that could be achieved by the split east turn alternative. Duane Anderson noted that this was the first he had seen of this document.

Discussion followed related to speech and sleep disturbance data. In response to a question by Guy Spencer as to a definition of the term "highly annoyed", Paul Dunholter replied that annoyance was generally measured in five different increments ranging from "extremely annoyed" not "not at all annoyed" and that for the purposes of the current analysis, the term "highly annoyed" included respondents in the two highest levels of annoyance.

### **Public Comments**

A member of the audience, Phillip B. Herres, then rose and distributed a document analyzing the data and Dr. Rudolph's interpretation of it. He disputed the analytical technique used by Rudolph, which he believed to be faulty. Specifically he maintained that the data from individual point analysis could not be added together. As a result, Herres maintained that Rudolph's conclusions were false. He invited committee members and members of the public to read his analysis and provide feedback.

Another member of the audience, Thomas G. Heltzel, then rose and distributed his analysis of the data. He also found fault with Rudolph's position and maintained that the split east turn would significantly increase the population exposed to noise while providing only modest decreases in noise to areas currently affected. Heltzel believes that the split east turn shifts noise from one population to another.

A member of the audience representing the group Citizens for Aircraft Noise Equity stated her desire for the equitable distribution of aircraft noise among neighborhoods around Sea-Tac Airport.

A resident of Madrona encouraged the Port to take a strong stance on encouraging increased use of the Duwamish corridor for departures.

A Leschi resident asked how the Integrated Noise Model accounted for changes in fleet mix after 5 years and 10 years. Dunholter noted that flight track modeling was based on existing 1998 conditions. However, future year projections for 2005 and 2010 show reductions in noise levels. This will begin to occur in 2003 as the F-28, MD-80 and other older aircraft leave the fleet in large numbers.

A Seward Park resident stated that the proposed split east turn appeared to shift noise from one community to another, which contradicted the intention stated in the Public Involvement Plan.

A citizen representing the City of Medina read a letter from the Medina City Council calling for the equitable distribution of aircraft noise.

The meeting adjourned at 8:45 pm.

**Sea-Tac Part 150 Noise Study Update**

**Minutes of the Joint Meeting of the Citizens' Advisory Committee (CAC)**

**and the**

**Technical Advisory Committee (TAC)**

**Status of Noise Measurements and Improvements in Modeling Based on  
Measurements**

**Sea-Tac International Airport, Small Auditorium, March 3, 1999 6:00 p.m.**

**Present:**

**Citizens' Advisory Committee:**

Mike Anderson (King County District #8)  
Jules Bloomenthal (King County District #10)  
Rose Clark (Burien)  
Jim Combs (City of Seattle)  
Lloyd Docter (City of Federal Way)  
Arden Forrey (King County District #2)  
Al Furney (King County District #13)  
Bud Jones (City of SeaTac)  
Richard Kennedy (City of Des Moines)  
Steve Mullet (City of Tukwila)  
Bob Rudolph (King County District #6)  
Guy Spencer (City of Normandy Park)

**Technical Advisory Committee:**

Suzanne Alexander (FAA, Seattle)  
Dick Haferbecker (Alaska Airlines)  
Stephen Kiehl (Puget Sound Regional Council)  
Pete Koski (FedEx)  
Cayla Morgan (FAA, Seattle)  
Loyce Saar (City of SeaTac Mobile Home Owners)  
Billy Self (Southwest Airlines)  
Cynthia Stewart (KCIA/Boeing Field)  
Eric Tweit (City of Seattle)  
Craig Ward (City of SeaTac)

**General Public:**

Lorelei Herres (citizen, Mercer Island)  
Carol Hetzel (citizen, Mercer Island)  
Clare Impett (KCIA/Boeing Field)



Dave Yee (FAA, Portland)

**Port of Seattle Staff:**

Jeff Fitch  
Rachel Garson  
Lynae Jacobson  
Ron Seymour  
Bob Wells

**Consultant Team:**

Claire Barrett (Claire Barrett & Associates)  
Paul Dunholter (BridgeNet Consulting)  
Ryk Dunkelberg (Barnard Dunkelberg & Co.)  
Mary Vigilante (Synergy Consultants)  
Michael West (Pacific Rim Resources)

**Total: 36**

**Handouts:**

- Agenda, Review of Recent Activities, Status of Noise Measurements, Improvements in Modeling Based on Measurements
- Land Use Subcommittee Activities
- Introductions, announcements, reports:

Those present introduced themselves.

**Housekeeping items:**

The Small Auditorium would be the site of all future committee meetings.

The next public Open House will take place on May 20, at which Final Baseline Noise Contours will be presented. Location is TBD, but will most likely be Tye High School, site of the previous two open houses.

R. Seymour introduced an e-mail from a CAC member regarding the format of committee meetings and solicited comment from attendees. Items requested were:

List of official members and the area they represent available at meetings;

Time at both the beginning and end of the meeting for members of the public who are not official committee members to speak;

Seating for committee members at the table,

Seating for other attendees alongside.

Committee discussion resolved in favor of the recommendations with the exception that a time for public comment be reserved at the end, not at the beginning, of meetings. In addition there was a

request that meetings begin promptly, and that meetings on subsequent evenings should be avoided if possible.

### **Reports:**

Activities since last CAC/TAC meeting, Nov. 18, 1998:

Ryk Dunkelberg noted that we have reached the point in the study where nearly all noise measurement has been collected and compiled. He noted that most typical Part 150 studies begin the evaluation and analysis process at this point, but due to the more comprehensive nature of Sea-Tac's Part 150 study, committee and consultant work has been ongoing for some time now. He added that one of the work products of this Part 150 study is four season monitoring and the final land use recommendations would be based on an "abated contour map" which would reflect any changes in operations recommended by the study. This abated contour map should be ready by the end of the summer of 1999.

### **Subcommittee Meetings**

- Data Subcommittee: 9/2/98, 11/11/98, 1/13/99.
- Land Use Subcommittee: 12/9/98, 3/2/99
- Operations Subcommittee: 10/16/98, 10/10/98, 2/10/98.

Land Use Subcommittee Report (Ryk Dunkelberg): During its last meeting on Mar. 2, the Land Use Subcommittee discussed the following three items:

The Approach Transition Area

Mobile Homes

Other airports' experiences with mobile home relocation programs. Bob Merryman of O.R. Colan gave this presentation.

The meeting provided a better understanding of the complexity of this issue and ended with an agreement to further study the possibilities (including working with local and federal housing agencies) for relocating mobile home residents in high noise areas.

Operations Subcommittee Report (Claire Barrett): The Operations Subcommittee has had a considerable number of items to examine. Claire Barrett referred the audience to pp. 4-5 of the handout, which featured a matrix of various operations, the decision-making agency, the date of the committee meeting at which the particular operation was addressed, and preliminary recommendations made by the subcommittee.

She gave two examples of issues where preliminary recommendations have been developed: arrival descent profiles and aircraft engine run-ups. In the first instance, the committee recommends working with FAA and airlines to keep arriving aircraft as close to the 3 degree descent profile of the glide slope as possible. On the run-up issue, the proposed recommendation is to keep the existing run-up locations, but to consider possible expansion of the nighttime hour restrictions during weekends.

Members of the committee discussed the glide slope issue. Billy Self of Southwest Airlines commented that arrival altitudes are tightly controlled by the Tower. Therefore, it may be possible to alter approach control's instructions to pilots to maintain a certain altitude until locking on to the glide slope. The key to a quiet arrival is a combination of a reasonably high altitude and a

minimum of maneuvering. When there is a lot of traffic, there is more maneuvering in order to maintain adequate separation. As a result aircraft arriving at night, when traffic is light, are quieter than the same aircraft during the day.

Consultant Presentation: Status of Noise Measurements and

Improvements in Modeling Based on Measurements (Paul Dunholter, BridgeNet Consulting)

Paul Dunholter noted that noise and operations monitoring had been completed for all four seasons and that final data reports will be available within the next few months.

Some key findings so far include:

Seasonal differences in noise levels from individual events are small. But because of seasonal differences in operations (north vs. south flow), noise tends to be greater south of the Airport in the winter and north of the Airport in the summer.

At distances greater than 5 miles from the Airport, some aircraft tend to be below the 3-degree glide slope on approach. Aircraft turning towards the Airport (north bound aircraft turning south in south flow) as they hit the glide slope are frequently the lower ones.

Aircraft with FMS/GPS equipment that fly a procedure established for this equipment stay on a much tighter path than those not so equipped, especially on takeoff. Not every departure procedure at Sea-Tac has an FMS procedure established, as yet.

In general, the loudest aircraft remaining are Stage 2 aircraft. Hush-kitted Stage 3 (formerly Stage 2), and heavy B747s generate slightly less noise. The quietest aircraft are the newly produced Stage 3 versions.

For the same version of a particular aircraft, hush-kitted aircraft are approximately 3dBA quieter than non-hush-kitted aircraft.

F-28s and narrow-body Stage 2 aircraft (B727, DC9, 737-200) generate the highest noise close-in to the Airport.

Close-in locations experience noise from many sources besides takeoffs and landings including near-continuous noise from taxiing, idling, take off roll and reverse thrust.

Low-frequency noise is greater at locations that experience ground noise than at locations that experience overflight noise.

Smaller commuter propeller aircraft overfly areas west of the Airport at low altitudes.

During bad weather, noise levels generated by individual aircraft are generally higher than in good weather, due to lower cloud ceilings.

For the same aircraft, single-event noise levels, for arrivals, during nighttime are generally quieter than during daytime. Possible explanation: less traffic requires less need for maneuvering; aircraft tend to fly "cleaner" at night because there is less traffic (where a "dirty" aircraft designates one with lowered flaps and landing gear).

The knowledge gained from this four season noise monitoring has had some practical applications. Input to the Integrated Noise Model (INM) has been adjusted to reflect the knowledge gained from the measurement data. Improvements to the noise model, which produces the current and future DNL noise contour, include:

Departure-climb gradients have been adjusted downwards to match actual climb gradients at Sea-Tac. Modifications were required for the MD-80, 737-300/400 and 757. These aircraft climb at a faster rate than Stage 2 aircraft, but not as quickly as assumed in the INM model.

Approach parameters were adjusted to generate higher noise levels to match the measured noise levels for certain aircraft types, including 737-400 and MD-80

Departing narrow-body Stage 3 aircraft (MD80, 737-300/400, 757) generate a wider noise footprint than assumed by the INM model. To account for this, flight tracks were dispersed to better match the measured noise values.

To include the contribution of ground noise to the contour, the noise from taxiing, idling and take-off roll was added to the noise model.

Run-up noise in the noise model was adjusted to better match the directivity characteristics demonstrated during noise measurements.

Noise from thrust reverser use was adjusted to better match measured noise levels.

Meteorological assumptions in the noise model (headwinds, temperature and pressure) were adjusted to better match the conditions in Seattle.

Measurements collected during this study and the adjustments made to the noise model as a result are likely to affect the FAA's next version of the INM. While the new INM version will not be completed by the FAA prior to the completion of this Part 150 study, committee members and the public should know that the work currently being done in this Part 150 Study will ultimately have implications on national noise analysis.

#### Questions and Answers:

What is the correlation between implementation of FMS and noise?

Noise from aircraft operating FMS tends to have a narrower footprint, so people on the ground who live farther away from the recommended path tend to experience less noise. People living close in and directly under the recommended path will experience more concentrated noise, however.

How prevalent is "tunneling" at Sea-Tac?

"Tunneling" refers to the FAA's practice of requiring departing aircraft to remain below a certain altitude while incoming aircraft descend overhead. This is a common procedure at all airports, and no more prevalent at Sea-Tac than elsewhere. When aircraft are "tunneled" or told to maintain a certain altitude at departure, this altitude is typically between 9,000 and 10,000 feet.

What is the status of the Committee's charge to examine the south departure corridor?

This will be examined at the next Operations Subcommittee meeting on Apr. 7 at 6 p.m.

**Suggestions from Comments from Committee Members, Consultants and the Public**

FAA staff responsible for writing FMS procedures should be brought into the current Part 150 discussion as soon as possible.

A committee member expressed a wish that before Port Staff make final recommendations to the Port Commission, Committee members have a chance to review and comment. Port staff and consultants responded that such a mechanism was built into the process.

**Meeting adjourned at 8:00 p.m.**

Sea-Tac Part 150 Noise Study

**Minutes of Joint Meeting of the Citizens' Advisory Committee And  
the Technical Advisory Committee**

SeaTac International Airport, May 13, 1998

The Regulatory Environment Surrounding the Part 150 Process Presentation, Discussion  
Facilitated by Ryk Dunkelberg, Barnard Dunkelberg & Company

**Present:** Craig Ward (City of SeaTac); Dick Haferbecker (Alaska Airlines); Mike Rees (King County District 4, Magnolia); Jules Bloomenthal (King County District 10); Bob Wells (Port of Seattle AV/Planning); Cayla Morgan (FAA – Seattle ADO); Dan Boyle (FAA - SeaTac); Roger Hamm (FAA – Boeing ATLT); Eric Twert (City of Seattle); Ron Seymour (Port of Seattle); Jenny Bessler (Port of Seattle – ATLOB); Clare Impett (KCIA); Rose Clark (City of Burien)

**Consultant Team:** Ryk Dunkelberg; Mary Vigilante (Synergy Consultants); Michael West (Pacific Rim Resources)

**Ryk Dunkelberg: Introduction.** Overview of current phase of project: Inventory phase, includes survey of all available existing information, Geographic Information Systems information, etc. The web site is up, and includes GIS information, scope, frequently asked questions, maps of permanent and temporary noise monitoring system, newsletter, and minutes. Address: [www.airportnetwork.com/sea/](http://www.airportnetwork.com/sea/)

Noise monitoring is in process, but with a few holdups. The airport's permanent noise monitoring system has been out of commission, and the temporary noise monitoring process didn't start until the permanent one was back up. This puts our work about one month behind schedule, so the committee meeting/open house scheduled for June 24<sup>th</sup> will be rescheduled for mid-July.

*What's next:*

- June 24: representatives from the Minneapolis-St. Paul Airport (MSP) will talk about their experiences with the Part 150 process. MSP is a hub for Northwest Airlines, which has an older fleet than most other airlines. MSP has had a more difficult time meeting Part 150 requirements as a result.
- Mid-July: CAC and TAC meetings, along with an open house at which a working paper will be presented with the inventory section and some noise monitoring data to date.

**THE REGULATORY ENVIRONMENT OF THE PART 150 STUDY**

Topics: Aviation Noise Abatement Policy (1976)

ASNA Act (1979)

Part 150

ANCA Act (1990)

Part 161

Amendment to Part 91

Part 36

### Overview Of Noise Abatement Policy.

1969: NEPA requires major federal projects to consider noise in Environmental Impact Statements

1976: FAA publishes noise abatement policy (handout, p. 2)

- o This policy resulted in Aircraft Noise Control and Land Use Compatibility Studies (ANCLUCS) – 20-year planning horizons that addressed aircraft noise and land use compatibility. Not regulatory, but advisory.

1976: U.S. Dept. of Defense initiated Air Installation Compatible Use Zones (AICUZ) studies looking at existing aircraft noise and developing broad land use compatibility guidelines

1979: Congress passes Aviation Safety & Noise Abatement Act (ASNA) (handout, p. 3). Congress:

- o Directs FAA to set forth standards for aircraft noise and land use compatibility
- o Directs FAA to develop a single system for measuring noise and a single system for measuring noise impacts
- o Directs FAA to identify one land use compatibility guideline
- o Sets aside money for noise planning and mitigation
- o Promulgates Part 150
- o Has FAA issue new regulations, calling for 5-year voluntary land use compatibility program and 2 noise exposure maps.

#### ***FAA Part 150 regulation process under 1979 ANSA Act (handout, p. 4):***

- o Each noise exposure map must depict DNL (annual average day-night noise level) contours, and any noise-sensitive land uses within those contours, as defined by the land-use compatibility table in Part 150. The 65 dB noise level is generally the loudest noise contour acceptable, unless the local airport sponsor (in this case, the Port of Seattle) adopts another noise contour and accepts responsibility for regulating land use within that contour.
- o After showing noise-sensitive uses and DNL contours, the number of people within those noise contours is calculated.
- o State noise contour regulations take precedence over the FAA regulations, but the FAA may not fund noise abatement efforts below 65 DNL.
- o NEMs (Noise Exposure Maps) are accepted (or not approved by the FAA region) in Seattle. There is no timeframe for FAA acceptance.

- The Noise Compatibility Program (NCP), in which the airport sponsor recommends noise abatement/mitigation measures, and outlines the procedure(s) the airport sponsor will follow to achieve these goals.
- The NCP is submitted to the FAA regional office, which forwards it to Washington DC for approval of individual measures.
- If the NEM and NCP are submitted together, once the NEMs are accepted by the FAA, the 180-day NCP review process begins. Upon approval by the FAA, they are *eligible* (but not guaranteed) for federal funding.
- (handout, p. 5) The FAA has historically spent public monies for sound attenuation or purchasing of non-federal land in areas that have previously been identified as within 65 DNL. The FAA now says that if a community allows *additional* residential development within a 65 DNL noise contour, then the *community* is responsible for paying for noise abatement/mitigation and *not* the FAA.

**Possible proposed amendments to Part 150 (handout, p. 5.2)**

- One proposed amendment would allow the airport sponsor to look at 8 – 15 year contours instead of 5 year contours for planning, and the FAA would accept these as Noise Exposure Maps (which they don't do now). This is just a rumor, but it may change the way the NEMs and NCPs are submitted.
- Currently there is no method to update an existing Part 150 – the process must start all over again. This process may be amended.

**The following topics were discussed in response to committee questions:**

- Making an exception to the 65 DNL level would be difficult for the Port of Seattle; it would be easier for an airport sponsor operating under a general purpose government. Is there an inter-local partnership agreement on land use? Ryk Dunkelberg will check with the FAA to see if this has been done somewhere in the past.
- Are there currently parts of the City of Seattle above the 65 DNL level?

Not within the city limits, but perhaps in unincorporated King County. New data is not available yet, but the existing data shows no part of the City of Seattle above 65 DNL.

- Does the noise-affected population include workers?

No, only those people who fall within the noise-sensitive uses such as residential, hospitals and churches. Commercial interests are not "at the table."

- What if the combination of 2 airports pushes the DNL above 65, but their individual DNLs are less than 65? (i.e. Boeing Field and Sea-Tac)

RD: It normally isn't addressed at all, because the two airports are usually owned by different people, and there is no planning mechanism to address a regional situation.

- Can the airport look beyond the 65 level in the Part 150 study, say 10 miles from the airport?

Yes, as long as there is still fairly good accuracy within the contours. At Sea-Tac the Part 150 Study goes out to the 55 DNL. Beyond 55, modeling accuracy is very poor, because it approaches the ambient sound level, which is 50-55 DNL in urban areas. Part 150 regulations don't concern themselves with anything beyond 65.



- The 65 DNL level is not considered intolerable with certain noise reduction measures built in. Indoor DNL levels are 45 or less are considered compatible. This can be achieved either through normal building practices or through sound attenuation.
- If the state were to decide to lower the acceptable DNL level, would the Port be required to spend its own money?

That depends on the way the statute is written. The State [of Washington] might have to compensate the local government (in this case, the Port) for the effects of new state regulations.

- What kind of measures are put into a NCP?

RD: You have to look at land use measures, physical facility measures, and operational measures.

### Overview Of Noise Abatement Policy, Continued

1990. Congress passes the Airport Noise and Capacity Act (ANCA), a new national noise policy (handout, p. 6). ANCA:

- Severely restricts the ability of the airport sponsor to implement reasonable noise access restrictions.
- Sets the date for the phase-out of Stage 2 aircraft over 75,000 lb. and sets the date for the phase-in of Stage 3 aircraft: year 2000.
- Grandfathers noise abatement programs dated prior to 1990.
- Promulgates Part 91 and Part 161 rules:
- Part 91 (handout, p. 7): Phase-in of Stage 3 aircraft, phase-out Stage 2 aircraft rules. There have been no waivers from the deadlines so far.
- Part 161 (handout, p. 8): Prohibits:
  - restrictions affecting access or noise that affect Stage 3 or 2 aircraft, such as limits on vent noise;
  - limits on total number of stage 2 or 3 operations;
  - restrictions on hours of operations; etc.

#### *Part 161 restriction options:*

- Voluntary agreements (handout page 8.2) – it is ok to voluntarily enter into noise restriction or access agreements with the users.
- If restrictions are placed on Stage 2 aircraft, regardless of weight, then the regulation must be based on an exhaustive noise analysis using Part 150 procedures, and a rigorous cost/benefit analysis. Certain conditions apply:
  - The FAA must approve the cost/benefit methodology.
  - The restriction itself doesn't need to be approved by the FAA, but there are procedural timeframes involved.
  - The cost/benefit analysis doesn't have to be positive (show a net benefit), but it must be done.
  - The FAA must be told what the restriction is.
  - The FAA is intentionally making it very difficult to pass Stage 2 restrictions.
- To restrict Stage 3 aircraft (handout, p. 8.3):
  - Basically the same analysis pertains as that restricting Stage 2 aircraft, but the cost/benefit methodology parameters are detailed in Part 161.
  - The FAA must approve the restriction.

#### *Part 36 (handout, p. 9)*

Part 36 regulates noise at the source – airframe and engine manufacture. Generally describes Stage 1, Stage 2, and Stage 3 aircraft. All aircraft manufactured today are Stage 3. There is some discussion in the industry about adding a Stage 3.5 or 4, to force airplane and engine manufacturers to achieve greater noise reduction.

- Some aircraft will be retrofitted to meet Stage 3 requirements (with "hushkits"), but they will not be as quiet as newly built Stage 3 aircraft.

**Port staff and consultants responded to the questions from the committee members:**

- What are the differences between Stage 2 and Stage 3 aircraft?

The difference between a Stage 3 or Stage 2 aircraft varies by plane, but it can be as much as 10 times quieter at departure.

- Can aircraft be required to follow specific takeoff procedures?

It is possible to request that an aircraft follow certain procedures, like cutting back on power, rather than requiring attainment of a specific noise level. Airlines have developed two procedures for takeoff, a "far out" and a "close in" procedure, based on populations living near the airport. The airport sponsor can request the procedure that reduces the noise levels the most.

- What about military aircraft?

Airports with significant military presence must generate two NEMs, one with and the other without military traffic. If there is a change in those noise contours, the FAA will not fund noise problems associated with military aircraft operations.

- Will the continuation of existing grandfathered noise restrictions (which are not allowed now under Part 161) be subject to the same exhaustive cost/benefit analysis requirements?

Only if the grandfathered restriction is amended. If you leave the existing grandfathered procedure or ordinance in place, no additional Part 161 analysis is required.

- Are there any operational advantages to operating quieter planes?

Yes, Stage 3 aircraft are quieter and also more fuel efficient, and they only require 2 pilots in the cockpit. There is a supply and demand problem for Stage 3 aircraft – they can't be built fast enough to keep up with orders.

- Are there still Stage 2 planes under 75,000 lbs being built?

There are Stage 2 aircraft being built under 75,000 lbs as business jets. These aircraft last a long time, and some move into cargo service as they get older.

- Flight track changes are a possible Part 150 restriction. Does the FAA want the airport involved in making these changes?

When flight track changes are made, the FAA prefers the use of Part 150 studies to identify those changes and get general community concurrence before making that change.

- What types of restrictions can an airport make?

An airport can restrict the types of aircraft that can land (due to restrictions enacted before Part 161, which have been grandfathered). However, an airport cannot determine the hours it is open or closed. The airport can work with the FAA to promote procedures that minimize noise impacts, but it has no unilateral control over aircraft movements. An airport can do noise attenuation, expand the remediation boundaries, etc. An airport has control of its facilities, communities have control of land use planning, and the FAA has control of operations. Bringing together all three parties is important.

- What can airports do?

At some airports, it may be advantageous to look at how airplanes fly, to identify those operators who operate outside the norm. Airlines might be encouraged to fly differently, i.e. use different types of approaches, reverse thrust, departure positions on the runway, etc.

- Where does the FAA stand on noise?

The FAA has the authority to require changes, but their priorities are: 1) Safety and 2) Efficiency. Noise as a priority follows these first two.

- Noise complaint monitoring and the Part 150 Process:

The locations of noise complaints will be incorporated into the study, but the number of complaints from a particular location will not be taken into account. At other airports, it has not been an accurate method for identifying noise problem areas. The committee disagrees about the weight that should be given to the volume of calls from a specific location.

#### Administrative issues

- There will be more regular meetings, reports in advance, more notice before meetings, minutes or meeting notes with the meeting notice. No meetings labeled "voluntary."
- Turnout has been disappointing for the last 2 meetings – please encourage people to attend the June 24<sup>th</sup> meeting.
- Committee wants work to do. During the inventory stage there is little to do, but later there will be plenty. By July we should have the inventory chapter in draft form and some data.
- The web site will have regular updates on the study. Material will also go to libraries.
- RD: Not all airports do on-site noise monitoring. It's not a Part 150 requirement. If they do it, it's usually for 7-10 days. We're doing it for a year, so we will have a cumbersome amount of data to go through.
- There is citizen concern about function and influence of the committee and the role of the citizens' task force. This committee is not a voting committee – it is for input and feedback from all interested parties. The report does not imply that this group has endorsed the recommendations. Anyone can add their own white paper or other input into the report.
- Send any questions or guidance for the Minneapolis guests to Ron.

**Sea-Tac Part 150 Noise Study Update**

**Minutes of the Joint Meeting of the  
Citizens' Advisory Committee (CAC)  
and the  
Technical Advisory Committee (TAC)**

**Status of Noise Measurements and  
Improvements in Modeling Based on Measurements**

**Sea-Tac International Airport, Small Auditorium, May 19, 1999 6:00 p.m.**

**Present:**

**Citizens' Advisory Committee:**

Duane Anderson	(King County District #5)
Mike Anderson	(King County District #8)
Jules Bloomenthal	(King County District #10)
Rose Clark	(City of Burien)
Jim Combs	(City of Seattle)
Arden Forrey	(King County District #2)
Al Furney	(King County District #13)
Doug Hakala	(King County District #3)
Betty Ivie	(King County District #4)
Bud Jones	(City of SeaTac)
Richard Kennedy	(City of Des Moines)
Bob Rudolph	(King County District #6)
Joanne Schaut	(City of Kent)
Guy Spencer	(City of Normandy Park)

**Technical Advisory Committee:**

Suzanne Alexander	(FAA, Seattle)
Dick Haferbecker	(Alaska Airlines)
Stephen Kiehl	(Puget Sound Regional Council)
Cayla Morgan	(FAA, Seattle)
Eric Tweit	(City of Seattle)
Glynis Casey (for Craig Ward)	(City of SeaTac)

**General Public:**

Elizabeth Dunn	(Leschi Community Council)
Carol Heltzel	(citizen, Mercer Island)
Lorelei Herres	(citizen, Mercer Island)

Heather Pierson  
Dave Yee

(City of Burien)  
(FAA, Portland)

**Port of Seattle Staff:**

Lynae Jacobson  
Ron Seymour  
Bob Wells  
Stan Shepherd  
Rob Kikillus

**Consultant Team:**

Claire Barrett	(Claire Barrett & Associates)
Paul Dunholter	(BridgeNet Consulting)
Ryk Dunkelberg	(Barnard Dunkelberg & Co.)
Mary Vigilante	(Synergy Consultants)
Michael West	(Pacific Rim Resources)

**Total: 35**

**Handouts:**

1. Agenda
2. Review of Airport and Airspace Use Actions
3. Land Use Options Outline
4. Statement of Part 150 Objectives by the SeaTac Citizens Advisory Committee (distributed by Citizens' Advisory Committee)

**Agenda:**

- I. Introductions, Announcements, Reports
- II. Citizens Advisory Committee presentation (Rose Clark)
- III. Noise Contours (Paul Dunholter)
- IV. Land Use Subcommittee Report (Ryk Dunkelberg)
- V. Operations Subcommittee Report (Mary Vigilante)
- VI. Preview of Open House
- VII. What's Next

**Introductions, announcements, reports:**

Those present introduced themselves. Ron Seymour reminded all present of the open house to take place tomorrow, May 21, at Highline High School from 4 to 8 pm.

**Citizen Presentation (Rose Clark for Citizens' Advisory Committee):**

The CAC distributed a handout entitled "Statement of Part 150 Objectives by the SeaTac Citizens Advisory Committee". After some discussion, Claire Barrett asked what kind of response was anticipated. Rose Clark responded that the Committee wanted there to be a record that certain issues had been raised so that they would be eventually addressed. Al

Furney suggested some way of establishing milestones for different issues raised in the document.

**Questions from Committee members:**

**What is the relationship between the Boeing Field/King County International Airport (KCIA) Part 150 study and the SeaTac Part 150 study? Can the two be coordinated?**

The KCIA Part 150 study is approximately 5-6 months behind the SeaTac Part 150 study. Despite their proximity, they are still two different airports, with two different sponsors (King County is the sponsor for KCIA; the Port of Seattle is the sponsor for Sea-Tac), thus the two studies cannot be combined according to FAA regulations. However, because of their proximity, the FAA is aware that flights to and from one airport occasionally become "overflights" of the other. Paul Dunholter noted that overflights from Boeing Field had been extracted from the noise model for Sea-Tac. Cayla Morgan of FAA stated that the FAA is aware that both airports are conducting Part 150 studies and will keep this in mind when examining each study. Duane Anderson noted that operations at one airport will have an effect on the other, especially with respect to tunneling.

**Consultant Presentation: Noise Contours (Paul Dunholter, BridgeNet Consulting)**

Data from all four seasons has now been compiled: April, August, November 1998 and January 1999. The source for the operations data is derived from a variety of sources including: the Airport Noise and Operations Monitoring System (ANOMS), Official Airline Guide (OAG), control tower activity reports, and the noise budget reports.

**General conclusions:**

1. The model is reasonably accurate for Stage 2 aircraft.
2. The model tends to underpredict for narrow body Stage 3 aircraft, meaning actual Stage 3 aircraft operations tend to make more noise than the model predicts. (Previous presentations noted that aircraft tend to be climb at a slower rate than predicted, which was one source of greater noise. Thus the model has had to compensate for this difference by assigning greater takeoff weights to aircraft).
3. Side noise propagation had tended to be underestimated and thus had to be widened for this model.
4. Typically poor weather has tended to result in "dirtier" planes (where wing flaps and landing gear are extended earlier to allow for greater maneuverability), slower speeds and thus greater noise.

Rough implications for the model have meant a widening of contours by an additional 2 dB and a lengthening by 1 dB.

#### **Contours for year 2004**

Contours for 2004 are shrinking. These contours are based on forecasts from the Master Plan Environmental Impact Statement (EIS).

The forecasts are based on a number of assumptions, including the following:

- Existing runway utilization
- Existing flight tracks
- Change in fleet mix to reflect:
  - Gradual Phase-out of F28s by Horizon Air and introduction of Canadair Regional Jets (CRJs)
  - Gradual Phase-out of MD80s by Alaska Air and introduction of next-generation 737s (series 700 and 900)

Version 6.0 of the Integrated Noise Model will be released after the current Part 150 Study is completed; probably in early 2000.

#### **Data for 2010**

Projected total operations for 2010: 473,750

Projected third runway operations: Conservative assumptions of 35% of all arrivals, 4% of all departures

Flight Management Systems not assumed in model.

#### **Reports:**

**Land Use Subcommittee Report (Ryk Dunkelberg):  
Discussion of May 12 meeting**

##### **Mobile home parks**

Based on current information, there are 17 mobile home parks within the 65 DNL contour and higher, representing a total of 987 spaces.

Within the 1998 Base Line 70 DNL contour, there appear to be nine mobile home parks including approximately 404 mobile homes. The parks are: Town and Country Villa, Tyee Valley, Town and Country Lane, Des Moines Estates, Locust Trailer Court, Marine View Manor, Burien Gardens Flora Vista, and Town and Country Villa. There are nine mobile home parks between the 1998 Base Line 65 and 70 DNL contours, containing approximately 583 mobile homes. Two mobile home parks (Burien Gardens and Flora Vista) are also within the north Approach Transition Area, There appear to

be four mobile home parks within the 2004 Base Line 70 DNL noise contour.

**Operations Subcommittee Report (Mary Vigilante):**

Discussion of flight track data, possible improvements to northbound departures.

1. Mountain north, directly east
2. SUMA: aircraft circle and head Southeast (Possible dispersal of flight tracks)

Possible improvements to southbound departures:

1. Early west turn over Puget Sound
2. West turn over Commencement Bay
3. Follow Interstate 5 south

**Suggestions, Questions and Comments from Committee Members, Consultants and the Public**

**Ridge measurements**

*Were measurements taken on top of the ridges near the airport or in the valleys? The ridge in Tukwila, for example, is about 400-500 feet high, which means that people living along the ridge are that much closer to aircraft.*

Measurements were not taken at tops of ridges in Tukwila.

**Run-ups**

*Do the noise contours include run-ups?*

Yes.

**Seasonal contour fluctuations**

*Is it possible that certain residents may be within the 65 DNL contour for certain periods of the year but not the whole year, and thus not qualify for sound mitigation for the purposes of the FAA?*

That is correct. However, the sound made by a 727 in August is not much different from the sound made by a 727 in January.

**North vs. South Flow**

*Have north flow and south flow been broken out of these data?*

Not yet.

**Assumptions of Fleet Mix and Implications for Environmental Impact Statement**

What is the legality of fleet mix assumptions used in forecasting, specifically will fleet mix assumptions require a supplemental Environmental Impact Statement?



The FAA requires forecasts that are "reasonably foreseeable." It is difficult to predict operations beyond 5 years, but ultimately the FAA decides what is "reasonably foreseeable." There is no requirement in the Part 150 regulations to use the fleet mix assumed in the EIS. The FAA's projections and the Terminal Area Forecast don't include as much detail as fleet mix.

**Action Items:**

- Separate North and South flows and provide that information to committee members.
- Send explanatory information clarifying EIS data to committee members.
- Have FAA make a presentation to the Citizens' Advisory Group on Part 150 policies and land acquisition issues similar to the one given to the City of Burien.

Meeting adjourned at 8:00 p.m.

**Sea-Tac International Airport FAR Part 150 Study Update  
Joint Meeting of the Citizens' Advisory Committee  
And Technical Advisory Committee  
Wednesday, April 26, 2000  
6:00 p.m., Large Auditorium**

**Attendees:**

**CAC Members:**

Duane Anderson (King County District #5)  
Rose Clark (City of Burien)  
James Combs (City of Seattle)  
Lloyd Docter (City of Federal Way)  
Arden Forrey (King County District #2)  
Al Furney (King County District #13)  
Doug Hakala (King County District #3)  
Bud Jones (City of SeaTac)  
Richard Kennedy (City of Des Moines)  
Connie Marshall (King County District #12)  
Mike Ranta (King County District #10)  
Mike Rees (for Betty Ivie, King County District #4)  
Dr. Robert Rudolph (King County District #6)  
JoAnne M. Schaut (City of Kent)  
Guy Spencer (City of Normandy Park)

**TAC Members:**

Dick Haferbecker (Alaska Airlines)  
Stephen Kiehl (Puget Sound Regional Council)  
Corbitt Loch (City of Des Moines)  
Rob Odle (City of Burien)  
Loyce Saar (City of SeaTac)  
Billy J. Self (Southwest Airlines)  
Cynthia Stewart (King County International Airport [Boeing Field])  
Craig Ward (City of SeaTac)

**FAA Staff:** Suzanne Alexander, Cayla Morgan

**Port Staff:** Charles Blood, Ron Seymour, Bob Wells, Lynae Jacobson, Rob Kikillus

**Consultant Team:** Claire Barrett, Paul Dunholter, Mary Vigilante, Michael West

Members of the public (approximately 300)

**Handouts:** Agenda, Operations and Land Use Sub-Committee  
Recommendations Summary, Resolution 882 (passed by the City of Burien)

**Welcome and Introductions**

Ron Seymour welcomed attendees and outlined the Port Commission schedule for flight track decisions. It is as follows:

- May 9: Staff recommendations to Port Commission, Auditorium, Sea-Tac Airport
- May 18: Port Commission public hearing, Auditorium, Sea-Tac Airport
- June 13: Port Commission meeting first reading of Resolution**
- June 27: Port Commission vote**

(NB: the June 27 meeting has been added since the CAC/TAC meeting, and was, therefore, not mentioned at that time.)

R. Seymour stated that the purpose of the evening's meeting would be to move Subcommittee recommendations to the full CAC/TAC Committee for votes. He described the process where Subcommittees make recommendations to the full CAC/TAC, which would then decide which recommendations to forward to the Port Staff.

Port staff will take the recommendation received from the CAC/TAC under advisement, as well as comments received from the public, and make their recommendations to the Commission. After taking note of these recommendations, the Commission will make their recommendations to the FAA, which has final decision-making authority on flight tracks. R. Seymour emphasized that this immediate process only concerns flight tracks; the Commission will take up all other Part 150 issues in August.

C. Barrett from the consulting team, then outlined the structure of the evening's meeting and noted that it would be divided into roughly three parts: Committee discussion, public comments, and full committee recommendations. She noted Ryk Dunkelberg's absence due to a family emergency. Because R. Dunkelberg has led all meetings of the Land Use Subcommittee, discussions and votes related to land use recommendations would be postponed to the next full CAC/TAC meeting on May 24.

### **Committee Discussion**

R. Clark noted that committee members has met regularly by themselves over the course of the study and presented a document outlining their concerns and recommendations.

#### Land Use Issues Discussion:

M. Vigilante presented a summary of land use issues, noting that because of R. Dunkelberg's absence no action would be taken. R. Clark asked that the wording on the Approach Transition Zones (ATZ) be more specific especially on the topic of rezoning land for commercial purposes and returning it to the local tax roles.

G. Spencer requested that the Port develop an airport build-out plan and that such a plan be shared with communities.

R. Odle noted that he had not seen larger-scale maps of the Approach Transition Zone (ATZ) with parcel lines. C. Ward said that larger-scale maps had in fact been produced, but that they did not show parcel lines. He noted that these maps need to be comprehensible to the people living in these areas. R. Clark noted that purchases were already being made in Burien and that this information was needed as soon as possible.

D. Anderson noted that in the handout of subcommittee recommendations that the wording of certain recommendations did not correspond to his recollection. C. Barrett stated that the committee was free to modify the language of the various recommendations as they wished.

In the discussion of noise barriers, C. Ward questioned whether the building next to the proposed noise barrier also acts as a barrier making a continuous protection. P. Dunholter replied that the building did act as a noise barrier.

R. Clark requested that a recommendation be made to construct a noise barrier on the west side of the Airport. P. Dunholter noted that the efficiency of noise barriers was directly related to their proximity to the noise source. P. Dunholter noted that constructing a noise barrier on the west side of the Airport would not effectively decrease noise impacts for those communities.

The discussion on the question of ground equipment noise centered on the question of whether the Port could provide ground power and conditioned air, or whether it should put this requirement in its leases.

L. Docter said that the idea was to include pre-conditioned air as a pre-condition of operation, and whether the Port provided it, or it was required in the leases

didn't matter. The point was not to wait for new gates to be constructed, but rather to do it now.

A. Furney pointed out that the Port is re-doing its electrical system and could be providing ground power over time.

Operational Issues Discussion:

Turning to the discussion of departure climb profiles, P. Dunholter presented typical procedures for "close-in" and "far-out" departure profiles. In the close-in procedure, aircraft climb faster and at a steeper angle than in the far out procedure. He noted that aircraft practicing close-in procedures tended to create less noise closer to the airport because they cut back power quicker. In committee discussion, B. Self of Southwest Airlines noted that the far-out approach was practiced at 90% of airports across the United States. L. Docter felt that this decision should be linked to the flight track issues, as the choice would depend on where the aircraft were flying. He opposed any change in the current procedure.

Turning to Flight Management Systems (FMS) in general, it was the sense of committee members that FMS should not be used over residential areas.

Flight Tracks Discussion:

Moving on to the subject of flight tracks, a nighttime departures heading southwest over Commencement Bay was discussed. C. Barrett pointed out that the CAC/TAC does not include representatives from Pierce County and that they should be included before any final recommendation was made. C. Marshall raised the larger question of whether any community not represented on the CAC and TAC would need to be included in deliberations. C. Barrett recognized that some areas of King County had expressed the view that they were not represented on the CAC. Nevertheless, she said, the CAC/TAC is comprised of representatives from each King County Council district as well as representatives from every municipality surrounding the Airport, whereas there is no representative from Pierce County on the CAC/TAC.

G. Spencer requested data for directing traffic over industrial and agricultural areas along the Green River Valley.

In the discussion of the Split East turn, the location of noise monitors and grid analysis locations was noted. Some committee members felt that noise measurement data did not accurately reflect the potential impact of the Split East turn on certain communities, particularly Mercer Island, the Rainier Valley, the Columbia Valley, Seward Park, and Bellevue, among others.

## **Public Comments**

Public comments included the following:

Communities should be united and not divided against each other.

Committee members should vote on meeting minutes.

Aircraft noise should not be shifted from one community to another.

Aircraft noise should be shared by all.

Bryan Cairns, Deputy Mayor of Mercer Island, stated that Mercer Island opposed any further consideration of the Split East Turn.

Residents around the Boeing Renton plant noted that total aircraft noise includes engine run-ups and testing in addition to flights from Sea-Tac. Aircraft noise from the Boeing Renton plant should be included with noise associated with King County Airport (Boeing Field).

Many citizens voiced support for use of the Duwamish/Elliott Bay Corridor.

A resident of the City of Newcastle stated that there was no representation from his community or other nearby communities.

## **Full Committee Votes**

The full committee then turned to voting on various recommendations. The wording of the recommendations was amended following discussion by committee members.

### **Vote #1: Identify, locate and construct a ground run-up enclosures / hush house immediately**

- Yes (unanimous): Docter, Schaut, Kennedy, Jones, Clark, Combs, Spencer, Forrey, Hakala, Rees [for Ivie], D. Anderson, Rudolph, Ranta, Marshall, Furney, Ward, Saar, Loch, Odle, Haferbecker, Self, Kiehl, Stewart
- No: 0
- Abstain: 0

### **Vote #2: Noise Barriers**

1. Construct a 20 foot noise barrier in the North cargo area of the airport no later than Jan. 1, 2006
2. Incorporate noise barriers into future cargo area design and development
3. Identify a suitable location for a noise barrier on the West side of the airport benefiting any community

- Yes (unanimous): Docter, Schaut, Kennedy, Jones, Clark, Combs, Spencer, Forrey, Hakala, Rees [for Ivie], D. Anderson, Rudolph, Ranta, Marshall, Furney, Ward, Saar, Loch, Odle, Haferbecker, Self, Kiehl, Stewart
- No: 0
- Abstain: 0

### **Vote #3: Ground Equipment**

1. Install power and conditioned air in existing and newly constructed gates to minimize use of Auxiliary Power Units and Ground Power Units
2. Consider language in new airline lease agreements regarding provision of utilities in jetways
3. Install fixed power in cargo areas no later than Jan. 1, 2006

- Yes (unanimous): Docter, Schaut, Kennedy, Jones, Clark, Combs, Spencer, Forrey, Hakala, Rees [for Ivie], D. Anderson, Rudolph, Ranta, Marshall, Furney, Ward, Saar, Loch, Odle, Haferbecker, Self, Kiehl, Stewart
- No: 0
- Abstain: 0

### **Vote #4: Support the following departure climb profile:**

1. Support Close-in Procedure: 0
2. Support Far-Out Procedure: 7 (Docter, Self, Jones, Rees [for Ivie], Ranta, Marshall, Schaut)
3. Support the Status Quo: 14 (Odle, Forrey, Saar, Ward, Kiehl, Hakala, Loch, Kennedy, Spencer, Clark, Haferbecker, Rudolph, Furney, Combs)
4. Abstain: 2 (D. Anderson, Stewart)

### **Vote #5: Support the South Flow Two Track Alternative with further consideration of options to disperse Elma and westbound traffic**

- Yes: 15 (Docter, Kennedy, Jones, Clark, Spencer, Forrey, Hakala, Rees [for Ivie], D. Anderson, Rudolph, Ranta, Furney, Loch, Odle, Self)
- No: 1 (Schaut)
- Abstain: 7 (Combs, Marshall, Ward, Saar, Haferbecker, Kiehl, Stewart)

**Vote #6: Oppose the south flow three track option as evaluated by the study**

- Yes: 17 (Docter, Schaut, Kennedy, Jones, Clark, Spencer, Forrey, Hakala, Rees [for Ivie], D. Anderson, Rudolph, Ranta, Furney, Loch, Odle, Self, Stewart)
- No: 0
- Abstain: 5 (Combs, Marshall, Ward, Saar, Haferbecker, Kiehl)

**Vote #7: Support nighttime (11pm-6am) use of a corridor through Commencement Bay for westbound south departures.**

- Yes: 19 (Docter, Schaut, Kennedy, Clark, Combs, Spencer, Forrey, Hakala, Rees [for Ivie], D. Anderson, Rudolph, Ranta, Marshall, Furney, Loch, Odle, Self, Kiehl, Stewart)
- No: 0
- Abstain: 4 (Jones, Ward, Saar, Haferbecker)

**Vote #8: Make Maximum Use of Elliot Bay Corridor with FMS**

- Yes: 19 (Docter, Schaut, Kennedy, Jones, Clark, Combs, Spencer, Forrey, Hakala, D. Anderson, Rudolph, Ranta, Marshall, Furney, Loch, Odle, Haferbecker, Self, Kiehl)
- No: 1 (Stewart)
- Abstain: 3 (Rees [for Ivie], Ward, Saar)

**Vote #9: If and only if Duwamish/Elliot Bay corridor capacity is fully utilized, use north flow dispersion of east turn flights; perform detailed study of equitable dispersion alternatives to be completed no later than January 1, 2002.**

- Yes: 14 (Docter, Kennedy, Jones, Clark, Spencer, Forrey, Hakala, Rees [for Ivie], Rudolph, Ranta, Furney, Loch, Odle, Self)
- No: 4 (Combs, D. Anderson, Marshall, Stewart)
- Abstain: 5 (Schaut, Ward, Saar, Haferbecker, Kiehl)

**Vote #10: If and only if Duwamish/Elliot Bay corridor capacity is fully utilized, use north flow split east turn if dispersion is determined impossible after detailed study.**

- Yes: 11 (Docter, Kennedy, Clark, Spencer, Hakala, Rees [for Ivie], Rudolph, Ranta, Furney, Loch, Odle)
- No: 5 (Combs, D. Anderson, Marshall, Self, Stewart)
- Abstain: 7 (Schaut, Jones, Forrey, Ward, Saar, Haferbecker, Kiehl)

**Vote #11: Oppose the stand alone split east turn, meaning that the committee opposes the split east turn without the Duwamish recommendation.**

- Yes: 11 (Schaut, Jones, Clark, Combs, Forrey, Hakala, Rees [for Ivie], D. Anderson, Marshall, Odle, Stewart)
- No: 7 (Docter, Kennedy, Spencer, Rudolph, Ranta, Furney, Loch)
- Abstain: 5 (Ward, Saar, Haferbecker, Self, Kiehl)



**Vote #12: Support the status quo on the North Flow East Turn**

- Yes: 0
- No: 20 (Docter, Schaut, Kennedy, Jones, Clark, Combs, Spencer, Forrey, Hakala, Rees [for Ivie], D. Anderson, Rudolph, Ranta, Marshall, Furney, Loch, Odle, Haferbecker, Self, Stewart)
- Abstain: 3 (Ward, Saar, Kiehl)

The meeting adjourned at 9:45 pm.

**Appendix Four. Comments from CAC/TAC & Subcommittee Meetings**

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Arden Forrey  
4916 Purdue Ave NE  
Seattle WA 98105  
18 October 1999

Ryk Dunkelberg  
Barnard Dunkelberg Assoc  
c/o Port of Seattle  
Seattle Tacoma Int'l Airport  
PO Box 68727  
Seattle WA 98168

Dear Ryk:

I would like to comment on the events of the 14 October 1999 meeting of the Land Use Planning Subcommittee of the Citizen's advisory Committee for SeaTac Part 150. The issues brought up regarding land use policy and jurisdictional zoning clearly depend upon observed and recorded data that for a study of this type should have been planned for and made available even before the study began. The questions asked at the meeting have been asked before and the data needed to answer them are available in public electronic records and thus easily collected. What has not been done, or even recognized, judging from reactions to several of the questions- both at recent Land Use Planning and Operations Subcommittee meetings - is that common conventions for the data concepts and their representations (vocabularies, identifiers, etc) have not been arrived at by consensus for either this Part 150 or any other nationally. Item number 1 of the CAC Statement clearly states that this issue is precursor to the other six items, noted as important concerns, and it makes some attempt in the Appendix to the Statement to suggest the fairly simple variety of objects and attributes that would help answer the subsequent concerns as well as the Expert Panel issues. My discussion following the 14 October meeting with panel member Steve Kiehl of the PSRC indicated that this data availability situation was quite familiar to him and that he and other members of the PSRC staff engage in dialog about such tasks daily with respect to other public issues. I am quite sure from other material he has sent that Paul Dunholter, who was not there, understands this issue.

For example, my question to state the number of identifiable properties within the Noise Remedy Boundary and the number of structures (unqualified) also within this boundary is a fundamental question relating to land use planning. Further questions could have asked: "Of those properties, how many are in Des Moines, Burien, SeaTac City, King County, Other?; how many are single family residences?; and, of those, how many owner occupied?; how many of the total structures are condominiums?; Of those condominiums, how many are owner occupied?". These questions could likewise be applied to the "Mobile Homes Question", extending the data to: "In addition to how many homes are in the mobile home parks, how many residents are involved?; what is the age distribution of these residents?; etc" And so on. These data can be acquired in electronic form from King County. Though neither the FAA nor the Port of Seattle has formally recognized the importance of how a common well-defined set of data will help expeditiously answer a relatively common set of questions that relate to any Part 150 study in the United States - and, as stated at the meeting, these Part 150 Studies are rapidly increasing - the value of common data must be recognized. The value to the nation, via the FAA, to the region and to this Study over time of having such a set of common conventions and a long term data architecture will not only help to begin such a study but also to repeat it over time and to compare studies across sites and time. These conventions and data will bring benefits to both surrounding communities and to the Port of Seattle over the long term because, at any one airport, one study follows another every five years or so, and having an ongoing information base is critical to not wasting crucial initial time starting efforts. For example, consider the waste of resources for the SeaTac Part 150 of having gotten 2 1/2 years into the study and not having the ability to answer expeditiously the two simple questions that I posed in a fashion that lead to clear decisions about policies that communities could take back to their jurisdictions; the impact on complex questions is much greater. And this is just land use planning. Consider Operations and the entire Flight Track set of questions which is perhaps more complex. Hence, the inclusion of Point #1 in the CAC Statement before raising other concerns. The immediate challenge for the Part 150 Study is to identify and abstract those data needed to answer a given questions - in this case for Land Use Planning.

The broader challenge to the Part 150 Data Subcommittee in support of the other two is to develop for the Port of Seattle a proposed action plan, starting from the embryonic CAC Statement Appendix, that identifies how the region that includes the Port of Seattle can create an ongoing information base related to air transport capacity planning. That would include SeaTac Airport as an immediate focus but have a structure that can accommodate airport

interaction (such as with Boeing Field as currently being considered). We must learn from our errors. For the Port of Seattle and the present SeaTac Part 150 study, the steps must be to define and use those pieces of such a permanent information base to benefit of the present Part 150 Study with the recognition that it will become a beginning resource for the next (in perhaps 5 yrs) Part 150 Study. Moreover, the charge to the Data Subcommittee must be to not only make recommendations about how to create a the information base for the Puget Sound Region, or this part 150 Study, but how also to challenge the FAA to develop a common set of conventions under OMB Directive A-119 and PL 104-113 on federal participation in voluntary consensus standards that apply to all such studies. The final Part 150 Study report should reflect that the CAC recommends that the Port of Seattle , with assistance of this State's Congressional delegation, formally request the FAA to take action on such consensus standards and help achieve recognition of the FAA's responsibility for such conventions. Even so on the part of the Washington State, the PSRC the Port of Seattle and the communities working together can achieve the full benefits of such consensus standards. Nevertheless, the CAC does understand how to tap the voluntary consensus process - which is well understood in industry who stands to benefit and it will contribute its understanding in order to achieve the expected benefits.

This situation brings to a head, through our mutual inability to answer straightforward questions about land use planning, the key role of information in this Part 150 Process. Together, we can address - and solve - the overall problem. Avoiding the problem is no longer a real option. I request that this letter be placed in the Part 150 Study Record and that the issue be added to the next Data Subcommittee Agenda.

Sincerely,

Arden W. Forrey  
Representative of KC District #2

May 1, 2000

Mr. Ron Seymour  
Port of Seattle  
Aviation Division  
P.O. Box 68727  
Seattle, WA 98168

RECEIVED  
MAY - 8 2000  
Barnard Dunkelberg

Dear Ron:

As a follow-up to the Operations Subcommittee meeting of April 12, CANE would like to officially convey to you our priorities for a Fly Quiet Program.

Working off the list of potential Fly Quiet elements from page III.8-2 of Wednesday's handout, CANE feels that the first two bulleted elements concern departure flight tracks, and are generally being dealt with in other areas of the Part 150 study. CANE would like to see a Fly Quiet program focus on the aspects of aircraft noise that overall measurement methodologies such as DNL, and the rest of the Part 150 Study do not address. In this regard, CANE would like to see such a program emphasize the next five elements on the list, plus an element, fleet quality, added during the subcommittee meeting. These priority elements would provide some noise relief from the noisiest flights, late night flight activity, for those people living close in to the airport, and those living under the approach flight track. CANE feels that this prioritization echoes the committee members' concerns that a Fly Quiet program be tailored to the activities which most directly impact peoples' quality of life, perhaps most notably, waking people up from sleep. The following elements are listed according to the priority that CANE recommends they receive in any sort of weighting process or index:

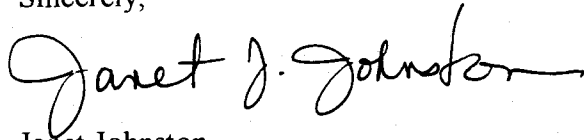
1. Late night and early morning (between 10 PM and 7 AM) departures and arrivals
1. Fleet quality (i.e. lower engine noise characteristics)
1. Monitoring and reporting adherence with nighttime run-up rules
1. Analysis of noisiest single event flights
2. Maintaining arrival glide slope use during VFR conditions
2. Maintaining desirable maximal altitudes

Finally, with regard to the discussion concerning whether a measurement index should be normalized by number of passengers, passenger miles or stage length, CANE feels that such a methodology would dilute the impact of the tool, and should not be included. As the Southwest Airlines representative at the meeting said, there aren't many empty flights out of Sea-Tac, and average load factors run over 70%. Secondly, an old 727 at 100% load factor is much noisier than a new 767 or 777 at 45% load factor, thus we see no

reason that an index should penalize quieter aircraft. The airlines have plenty of financial incentive to make efficient use of their aircraft without a noise incentive.

Thank you for taking our comments into consideration as you complete the Fly Quiet program component of the Part 150 study.

Sincerely,

A handwritten signature in cursive script that reads "Janet J. Johnston". The signature is written in black ink and is positioned above the printed name.

Janet Johnston  
Chair  
CANE

Cc: Paul Dunholter  
Ryk Dunkelberg  
Charles Blood

**Ryk**

---

**From:** Bosl, Frank @ Seattle [fbosl@cbrichardellis.com]  
**Sent:** Thursday, May 11, 2000 4:33 PM  
**To:** 'ryk@bd-c.com'; 'sales@airportnetwork.com'  
**Cc:** 'blood.c@portseattle.org'; 'seymour.r@portseattle.org'; 'miker@pobox.com';  
'debra.adler@cexp.com'; 'lesjam@drizzle.com'; 'rena@post.com'  
**Subject:** GPS/FMS for Southflow Arrivals

Ryk and Paul,

I am sorry Ron did not feel there was time last night to allow the public to comment on the proposed fly quiet recommendations. I had intended to ask for a clarification on the language relating to "FMS curved approach through Elliott Bay." The recommendation reads, "Work with FAA to develop an FMS curved approach for aircraft from the west."

My question is whether the use of the word "west" is intended to include flights arriving from the north and east. I ask this question in light of the consultant's recommendations dated 4/6/99, pages 10 through 12. In that report, the consulting team recommended GPS/FMS for southbound nighttime flights arriving from the east and north as well as the southwest.

Is this still the recommendation? If so, those communities currently under the southbound arrival track would like the report to explicitly reference use of GPS and FMS for nighttime flights. In fact, Debra Adler asked me to raise this issue last night on behalf of the Montlake Community Council, as well as the northeast district council, comprising 15 Seattle neighborhoods, who have recently voted to ask the Port to take an affirmative position on this issue. I also feel comfortable in stating the communities stretching from Beacon Hill to Montlake, who also bear the brunt of the southflow arrivals, would also support this request.

I suspect you intended to include reference to GPS and north and east flights in the recommendation, but we would appreciate a clarification in your final draft. Please let me know either way so I can pass your response on to the community councils.

Thanks, as usual, for your help.

Frank Bosl

P.S. Ryk, I also look forward to your clarification of the confusion relating to the staff recommendation for the existing FMS procedure for the Mountain flights on the Northeast Turn. As noted, the staff verbally recommended no FMS over resident neighborhoods to the Commissioners on Tuesday. An affirmative act of terminating the existing procedure for the Mountain flights would be required as opposed to "staff recommends no change in the established procedures at this time."

**Appendix Five. Summary of Open Houses**

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**SEA-TAC FAR PART 150 STUDY**  
Summary of Open House Comment Sheets  
December 3, 1997

There were one hundred forty-one comment sheets turned in at the open house, including several letters. The comments have been categorized as follows; run-up comments (9), condo insulation comments (15), third runway comments (18), flight tracks comments (24), insulation boundary comments (26), anti-Port comments (16) and general comments (23). In addition, there were ten comments pertaining to the Noise Monitoring Station. These were not reviewed.

**Boundary Comments**

24702 12<sup>th</sup> Ave. South-Street farther south has insulation but we don't Why? We want to be included.

10715 8<sup>th</sup> Ave. South-Am told noise in "no problem" but it is, I live here, will be worse with third runway, do something.

14025 5<sup>th</sup> South- Boundary is at 6<sup>th</sup>, want to be included.

If clear zone moves four blocks west, so should insulation boundary. Vibration worse than noise, cracks appearing, black greasy film on house that was not there five years ago, is food from garden safe to eat? Burien

1121 S. 249<sup>th</sup> Place-12<sup>th</sup> Ave. just north and south of South 248<sup>th</sup> is not in program Why? 12<sup>th</sup> Ave South of Salt Water Park is!

24716 12<sup>th</sup> Ave. Des Moines-East property line is west boundary of eligibility, operations have increased and DNL has grown with third runway even worse, want in program.

20810 7<sup>th</sup> Place South-If air traffic has increased, noise has to increase, why did insulation area decrease by one-third and homes are not now eligible?

16912 Ambaum Blvd. South-can't sell home, not in program, would welcome noise monitor.

253 S. 163<sup>rd</sup> Place-What is criteria for being in program, arbitrary boundary not equitable, wants a DNL reading at his home-increase freeway traffic as a result of third runway, can a concrete barrier be put up? Will area residents get tax break since NIMBY's voted out new site? What about a forth runway?

16517 5<sup>th</sup> Ave. South-Gap in boundary-Draw line south from 1605 and 4<sup>th</sup> Ave. South to the junction of SW Normandy Road, Ambaum Road, Des Moines Memorial Way and Des Moines Way south. Fill in the gap!

2017 S. 281<sup>st</sup> Street- Consider Stage two limits at late night, 7am Departure at low level also expand insulation of homes.

14629 3<sup>rd</sup> Ave. South-expand boundary.

24832 12<sup>th</sup> Ave South-Can't sleep, the third runway will be worse, have done homes one-half block away, do mine.

24610 12 Ave. South, Huntington Park-wants in program.

15931 & 15937 Des Moines Memorial Dr. Please include business in insulation.

10832 5<sup>th</sup> South-expand program into Beverly Park.

3709 S. 192-Full review of boundary line-noise is very disturbing, neighbors are insulated but we are not.

14016 5<sup>th</sup> South-on hill, by freeway, wants in program.

Comment that person wants insulation in Angle Lake Manor Community, also concerned about fuel deposits.

10710 Country Club Land South-in light pink of 1996 map, wants insulation, very noisy.

20824 7<sup>th</sup> Ave.-Don't agree with noise remedy program, we are on a hill overlooking Des Moines-how can it be quieter here than three homes away.

20824 7<sup>th</sup> Ave.-No straight answers, if expanding to the west why isn't boundary moving west?

26031 10<sup>th</sup> Place South-Woodmont area of Des Moines-I am 4 blocks west of boundary.

Repeat of above comment.

### **Flight Tracks**

Des Moines-Fly right over house, midnight one the worst.

SW 151<sup>st</sup> Place-Propeller aircraft too low, Horizon 6-6:30 am and 11:00 pm worst.

Military Road-Planes flying farther east, impacts his home, Alaska is worst.

Reduce aircraft noise between 11pm and 7am, insulate schools.

One and one-half mile west of 188<sup>th</sup> tunnel, early morning (12-4am) operations and run ups.

Propeller aircraft that buzz houses.

Maplewild Ave.-Stop 4am Eva Flight.

Change of flight track on south departure-more westerly, night noise 11-1am and early morning 5 am-8 am.

Federal Way-Why can't planes use business corridors and highway corridors all the time?

Redondo Beach- 5 am-5:30 am flight and 11:00 pm flights.

Des Moines-There have been recent deviations over North Hill.

18611 1<sup>st</sup> Ave. South-3 or 4 am flights or run ups.

Twin Lakes, North of 320<sup>th</sup> -Night landings with reverse thrust.

Burien-Blasted out of bed by 2:30-3 am flight, wants sound barriers.

Burien-Prop aircraft at 1,000 feet in evenings-could they be put on jet paths if traffic light?

Des Moines, Recently bought home-too many overflights, help!!

Des Moines-Southern take-offs, why not satellite airports, Also, what ADA accessible building for next meeting.

Des Moines-Early morning north departures are very loud.

Beacon Hill-Noise intolerable-Boeing Field adds to it.

NW 1<sup>st</sup> Street-Please distribute eastside flight tracks to equalize impact over wide range, all turns over my home.

12611 4<sup>th</sup> SW-Small planes, FED EX feeders, fly low over homes, loud and dangerous.

Why does it take so long to study-no ail crises-return to higher flight corridors, profit is coming before peoples lives, reduce the noise!!!

Rainier Valley-Does not make sense to fly so low over RV-planes should use much steeper departure and arrival angles, like John Wayne!!

8627 9<sup>th</sup> Ave. SW-Planes flying too close to Westcrest Park.-Call and get flight track printout-shows aircraft not coming close, but I see them!!

### **Third Runway**

Normandy Park-What will third runway do to my property values?

Kent-insulate or buy out apartments at south end of new runway.

Typical Port Action-12<sup>th</sup> Ave. abuts new runway, people in Hartington Park need relief.

Third Runway not needed, stop thinking of your power hold and think of the people-too expensive.

Normandy Park-assessed value of home has fallen, area of noise greater than what is under consideration-problem continues to grow.

24515 9<sup>th</sup> Ave. South-noise is real problem, will be more with third runway, will noise remedy try to remedy this in our area?

Put new runway on east side and terminals on west side.

Where exactly is the third runway east of 12<sup>th</sup> Ave.-thanks for Open House, informative.

239 SW 189 Place-Why not do noise study at 620,000 operations, that is threshold capacity it could be low-What is real maximum number of operations, why is mitigation not based on greater than 620,000 operations?

Don't believe the third runway will ever be built, west of a lot of money and effort.

Look at other options to third runway, Paine Field, Mosses Lake, peoples lives should be number one priority.

We need a modern terminal with proper infrastructure, delays are a result of poor infrastructure, don't need a third runway, many airports operate with two runways, what does that tell you!!!

Public won't get to vote on third runway, meeting just to pacify the tax payer, Port seems to have its mind made up.

I haven't slept for two and one-half months since the area on 24<sup>th</sup> St was logger from 12-4:00am worst. Feels and sounds like an earthquake.

Port did not do best to find site for second airport, all the studies will not help those who are losing their homes, build run-up facility, need better map of third runway.

Congratulations for the third runway, no stopping population growth, this will bring more economy.

14612 11<sup>th</sup> Ave. South-Want to know more about north RPZ. Do not want aircraft flying over , Port should buy all homes before runway is started, would like to be bought out.

### **Condo Insulation**

19801 32 Ave. South-in Sea Tac, wants condo insulation.

Same Address, Mark XI condos, wants insulation.

Mark XI condos, wants insulation.

Condos on Angle Lake want insulation.

1275 11<sup>th</sup> Place South-Five unit apartment, wants insulation or buy out, south of third runway.

Ambaum Square Condos, Des Moines Memorial Drive and South 176 Street, well received by Claire Barrett, wants insulation.

Burien, Wants insulation based on dollar/family ratio, schools need attenuation, homeowners have chosen to live near airport but students have no choice.

1227 SW 132<sup>nd</sup> Lane, #721-Thank you for holding open house, found information useful. Insulate condos and schools, expanding Sea-Tac is a waste of time and money, we should look for a new site.

1606 South 128<sup>th</sup> Street-Review status of fire station, people live and sleep there, twenty-four hour shifts, all day long.

Insulate public meeting facilities, Des Moines Masonic Center, 2208 South 223<sup>rd</sup> in Des Moines, use as public assembly by many groups.

Learned a lot from charts and consultants, very helpful and good listeners, wants insulation for condos at Angle Lake.

Condo owner, Mark XI condos, wants insulation.

Alder Creek Condos, 2311 Kent, Des Moines, wants insulation.

### **Run-up**

Burien, where is all the neighborhood? Not notified, run up in middle of night, disgrace that Port allows it.

Laural Estates-Night run ups, will they insulate town houses in Tukwila?

Sunday morning and evening run ups, thrust reverse, prohibit them and night flights and night helicopters over Burien.

Run ups 10-12:30 at night, no sleep.

Shorewood Area-10-11:30 at night, 8:00 am run ups, wants hush house.

Run up noise 10-12:30 pm, 5-6:00 am, too loud.

What happened to the hush building promises several years ago, must have top priority.

Noise over Burien worse last six months, early morning run ups, wants hush house.

Sunday night, 10-11:00 pm, can't sleep, house has been insulated by Port.

### **General "Not Happy" Comments**

Port of Seattle has lied, "I am going to try my whole life to someday make them pay for the way they have treated the southern cities".

Usual disinformation session.

I am concerned the study will not really help us, air pollution is bad.

Like everything else the Port has said, I doubt if any of the positive will ever come true.

Average noise is misleading, the peaks hurt (compared to average TNT dropped over in WW II).

Fines are meaning less, a slap in public face.

I believe your desire to provide a livable environment is a farce.

You must pay people for their loss due to your profit.

The noise concentration will be increased, what I heard was that take-off patterns will not be altered to spread the hurt. Study after study will not dilute the political and business reasons with the airport is expanding and imposing damage to the tax payer and citizens.

This meeting is a farce, was told they were not going to enlarge the boundaries, why am I here, waste of time.

Overall quality of life concerns, no one should trust the airport, people who are impacted should not have to support with taxes, let NIMBY's pay the cost.

Did not like presentations or information, waste of time.

I would like people who say no planes take off after 12 or 1 am to come stay in my house, intolerable.

This means nothing, when it is over, you will do what you want.

Same old story, I have been complaining the last 30-35 years.

SEA-TAC forced planes to go to Boeing, now bothering me, lives by Lake Washington, also hears SEA-TAC noise.

#### **General Comments.**

Appreciated being invited, well received information.

Judy Duff, PO Box 66925, Seattle, 98166, 246-8266, Member of North Highline Unincorporated Council, wants to be on TAC.

Manufactured home, 2703 S. 205 Place, needs help.

Just moved to Des Moines, noise very bad, needs help.

Request neighborhood meeting with Port representative about our street, just outside sales assistance, want to be in sales assistance boundary, 10716 Country Club Lane.

Same comment.

Same comment.

Student at Mt. Rainier High School, wants schools insulated.

1009 South 146<sup>th</sup> Street-Interested in Phase 2 buyout for north approach area.

20815 5<sup>th</sup> Ave. South-How is a homeowner compensated for value when selling house after living there since 1964? Outside of noise remedy program, appraised value is below standard.



We like home at 136<sup>th</sup> and like to live here not to live north Beach.

Elvin C. Renos, 4015 164<sup>th</sup> St SW, #34, Lynnwood, WA.-Please put street identification on your maps, I would like any new information on the airport construction or plans and exit and egress form 509 to roads, highways and airport.

Arlene Brown-Why does your poster say you consider reflections when the current models do not per Port of Seattle, see response to comments in FEIS-how are you going to include reflections. Reflections from recent construction increased noise by over 5dB.

I would like to meet area representatives especially Ann Bonney of Glendale, who appears to be the nearest to our residence in Glen Acres. Would also like to be on mailing list for meetings. I an the President of Glen Acres Homeowners Association which ahs 225 residences. How can we open discussion about present boundary adjustments? John P Payseno, 10742 Glen Acres Drive South, Seattle, 98168, 206/431-2838

Why was the noise line changed? It now takes over thirty seconds longer before it will allow you to leave a message. It no longer allows you to push the numbers to avoid hearing how it isn't operational.

Please add me to your mailing list. Your phone number does not provide a way to leave your adress for the Part 150 study during non-business hours. Arlene Brown, 239 SW 189 Place, 206/654-1533.

Why is there no response to hot line comments on aircraft in wrong place, flying low , breaking of t early, etc. RT Nolting, 2432 South 152<sup>nd</sup> 243-9922

No projections for contour for the third runway and increased flights in 10 years. The impact of the potential noise increase and its effect on surrounding areas is critical to many of us who are considering moving with the threat of increased noise. The potential mitigation of Port sponsored acoustical insulation is important to many neighborhoods. Please complete your modeling early and make your compensatory acoustical pledges early to avoid any more flight from potentially impacted areas.

We live at 2415 S 144<sup>th</sup> - the clearing for the parking lot at 150<sup>th</sup> and 24<sup>th</sup> has increased our noise considerably in the house. Are any new trees or sound walls going to be installed to reduce this upon completion of the lot. Also, the run up noise is considerably louder. Some discussion and concern should be given to the residents on the NE side of 24<sup>th</sup>. If possible, I would appreciate a monthly and quarterly report showing the comparison of noise monitors from 96 and 97. William and Marguerite Rus, 242-2756.

What about a "spotters guide" form the noise abatement program so that the noisier planes like 727 and MD 80 can be identified. Some airports provide this, shouldn't homeowners around the airport receive this?

ATTN: Mary Vigilante: Since the NEPL was logged the noise has increased hugely and the ground vibration is so severe out of town guests feared earthquakes. I have not slept a whole nigh for two and one-half months. I have to take sleep aids every night, I am losing it because of sleep deprivation. Please buy our home for enough money to give me a decent week of sleep and a home without noise and vibration. ASAP Thank you for your congenial attitude, you give me hope!!

You can use GIS to update contours almost real time (or 72 hours old). Make flight tracks and contour info available to the public.

**Comments from Sea-Tac Part 150 Noise Study Update Open House,  
Nov. 19, 1998, Tyee High School, 4-8 pm**

**Flipchart comments:**

Number: 8

Categories (number of each):

Data collection timing: 1  
Land Use issues (Single-family & multi-family dwellings currently  
considered together; suggested separate consideration): 1  
Meeting procedures: 2  
Nighttime noise and curfew: 2  
Operations (flight tracks, glide slope): 2

**Comment sheets**

Number: 22

Categories (number of each) (Some comment sheets contained multiple  
requests or remarks, therefore the following numbers will add up to a sum  
greater than 22.)

Comments on aircraft operations: 5  
Comments on Port's home insulation/mitigation policy: 2  
Corrections to display information (spelling, identification of buildings): 2  
Expressions of thanks: 2  
Requests for additional information on website: 2  
Requests for explanation of generation of noise contour maps: 1  
Requests for FAA presence: 1  
Requests for noise audit; response requested 2  
Requests for representation from unincorporated King County areas: 1  
Requests to have noise monitors installed on individual's property: 4  
Requests to move position of current noise monitors: 2  
Suggestions to change noise monitoring methodology: 1

**Flipchart comments from Sea-Tac Part 150 Open House,  
Nov. 19, 1998 Tyee High School**

1. Provide portable microphone at CAC, TAC meetings
2. Hold meetings in Seattle neighborhoods which are adversely affected by noise: Beacon Hill
3. Change flight tracks so noise is more equitably spread out
4. Change glideslope of planes from 3° to 5°. Do this NOW.
5. Nighttime curfews—use Duwamish Corridor—stop flying over Beacon Hill at night. Do this NOW.
6. Why has nighttime noise doubled since 1996? Why are your noise collecting dates either before or after major holiday periods and not any during?
7. Will the Port of Seattle suggest to carriers that flight tracks or departure procedures be altered, during noise monitoring periods, to alter data?
8. Separate large, multi-family buildings from single-family townhouses—they are in effect like houses.

# Part 150 Open House Comments

Name, Address

Comments

4448 So. 175th St

After 10pm Stage 3 aircraft are continuing to operate. During the late operating hours a increase in whine (high pitch) sound is affecting my sleep at night. At times it is very bad. Rev-up hours should be decreased and a hush house should be built. In general a new site should be chosen for a new international airport.

Preferential runway use: More balanced use between north and south. Prop tracks to the west: more use over water.

Duane Anderson  
P. O. Box 88745  
Seattle WA 98138

We would like a noise monitoring station in our community. We want a report of the station's findings.

Duane Anderson  
P. O. Box 88745  
Seattle WA 98138

Our community is not incorporated but that does not mean that we are not interested in this issue. We need to be represented just as much as the incorporated communities of SeaTac or Tukwila, and not just lumped in with other areas in a county representative's district.

Name, Address

Comments

Waneta Bossnat  
25327 29th Ave So.

The 'cargo' and 'foreign' planes drift over the 29th Ave So. On takeoff many days. I do not recognize the markings. They are huge noisy planes.

George Hadley  
1401 SW 172nd St  
Normandy Park WA

I would like to see an accurate model verification run made. Prior to the Jan 99 monitoring session, execute the model with (predicted weather, traffic, etc.) for that specific period. Then monitor as scheduled. Finally run the model again with the actual weather, actual traffic, etc. Contrast the results of these 3 sets of data. I'd like to see this done for (at least) Monitoring Stations 1 and 2.

George Hadley  
1401 SW 172nd St  
Normandy Park WA

Proposed Noise Monitoring Site Location is Sacajawea (?) Jr. High School (not Jaca...)

George Hadley  
1401 SW 172nd St  
Normandy Park WA

Verify spelling of Ms Cynthia Stewart's (sic) name on Organizational Profile chart. How many Ts in Steve Bennel (sic), Jules Bloomenthal or Bloomenthal is spelled differently between CAC and Operations.

Name, Address

Comments

James A. Holloway  
25213 29th Ave S  
Kent WA 98032

My house borders with approx 70-80 ft of the existing boundary for the noise control insulation program. I understand that boundaries have to be set somewhere but what concerns me is that after looking at all the charts of takeoffs and landings, the charts do not reflect a true representation of flight patterns. Is it due to maverick pilots who on a daily basis buzz over the top of my house, or is it due to the congested traffic which cause alterations to the norm? Are these examples taken into consideration?

Merle W. Johnson  
2105 S. 279th Pl  
Federal Way WA 98003

We will be glad to volunteer our yard for a noise level study. Presently we are less than one city block south of recently improved homes (we can visibly see some of these homes.) We are positioned immediately below flight pattern. Our present inside noise level is very unacceptable; outside level is horrendous to put it mildly. Please consider our location as a possible study location.

Barbara Johnson  
2105 S. 279th Pl  
Federal Way WA 98003

The comments and information give by the personnel here have been very informative. We are currently within the 65 DNL zone and will be willing to allow a noise monitor to be placed in our yard for testing.

Albert Kaufman  
3308 19th Ave S  
Seattle WA 98144

Beacon Hill's Wish List for the SeaTac Part 150 Noise Study: 1. Change Flight Tracks so that noise is distributed more evenly among neighborhood. Re-do flight tracks. 2. NOW: Change glide slope for all in- and out-bound flights from 3 to 5 degrees 3. NOW: Nighttime curfews must be enforced. All flights between 11pm and 7am should use Duwamish Corridor. We are experiencing too much nighttime noise.

Name, Address

Comments

Albert Kaufman  
3308 19th Ave S  
Seattle WA 98144

Where is the FAA? There should be at least 5 representatives from the FAA at each open house. Also--put a link to the FAA on the SeatTac website

Albert Kaufman  
3308 19th Ave S  
Seattle WA 98144

Move monitor T-10 to Jefferson Park on Beacon Hill. Also, Jefferson County Center is available for public meetings & open houses.

Albert Kaufman  
3308 19th Ave S  
Seattle WA 98144

Here's an idea, have planes turn on approach and departure within 2 miles of runway end. They could be following the water in. This plus equalizing the impact by also using current flight tracks would be a great change. We need some relief Beacon Hill.

Albert Kaufman  
3308 19th Ave S  
Seattle WA 98144

Put the data--noise data + flight track data that's on airportnetwork.com (Paul Dunhofer) on the Part 150 Study website. At next open house, how about providing more GIS terminals and printers for people to work with?



Name, Address

Comments

Frances Kenny  
2507 South Horton St.  
Seattle WWA 98144

Please remind Paul (Dunbother) to put a noise monitor on top of Beacon Hill--at the golf course--to get a true reading of noise at our 200-ft elevation. The location now is on the lower southern portion of the Beacon Hill slope. Thank you.

Russ Ladley  
27716 21st Pl. South  
Federal Way WWA

I would appreciate a discussion on how the noise contour profiles were developed. Noise sensor placement could bias data significantly depending on elevation, vegetation, and topography. We do not qualify for noise mitigation. However, when conversing on the phone we are interrupted by some flights. A TV remote must be in hand to hear the sat as well.

Man Wah Leung  
27708 23rd Ave So.  
Federal Way WWA 98003

My house was disqualified due to the fact that it was built after the 1987 cut-off date. I was notified of this disqualification after waiting for one full year. I would like the Port to set out such criteria at the beginning of the application process so that people living in neighborhoods affected by aircraft noise can plan ahead--either stay to endure the noise or move! I would like to request a noise audit for my house. Please notify me if this is feasible.

Patricia Rosenthal  
7517 S. Lakeridge Dr.  
Seattle WWA 98178

First, I want to thank Ron Seymour and Lynae Jacobson for their patience and information. You have been very helpful. We in West Hill Community Council, represented by Dwight Peltz, feel we are impeded by aircraft traffic and noise. Your open house provided an opportunity for our representative to gain access to information we would have otherwise remained ignorant of through our official county representative, Mr. Chip Doring.

Name, Address

Comments

Mele T. Skare  
2102 S 279th Pl  
Federal Way WA

We offer our house as a testing station and are we in the 60 or 65 decibel location? Cannot tell from your map

Kay Skare  
2102 S 279th Pl  
Federal Way WA

I fell that this get together was not informative - I would like to offer our house for testing - Houses in our neighborhood that aren't in the flight pattern somehow got the noisy package, where we were told we are not covered and we are definitely in the flight pattern.

Monday, November 23, 1998

**SEA-TAC FAR PART 150 STUDY**  
Summary of Open House Comment Sheets  
Open House Two  
July 23, 1998

There were seven comment sheets turned in at the open house. The comments have been categorized as follows; condo insulation comments (2), flight tracks comments (1), insulation boundary comments (1), air quality comments (1), home purchase comments (1) and general comments (1).

**Condo Insulation Comments**

19801 32<sup>nd</sup> Ave. South, No.11-Wants to be included with single family homes in insulation. Live in a townhouse.

19801 32<sup>nd</sup> Ave. South, No. 6-Wants to be included with single family homes in insulation. Live in Angle Lake townhouses.

**Flight Tracks, Restrictions and Approach/Departure Angles**

2119 17<sup>th</sup> Avenue South-Beacon Hill Area-Restrictions should be placed on when aircraft can operate at the airport, flight tracks should not be over populated areas, steeper landing and take-off angles need to be examined.

**Insulation Boundary**

24702 12<sup>th</sup> Avenue South-Our home is not included but others on 12 Avenue to 272<sup>nd</sup> is. We want to be included in Huntington Park.

**Air Quality**

15051 29<sup>th</sup> Avenue South-I have written about air quality before, very bad at ends of runway. Wants a reply.

### **Home Purchase**

15059 29<sup>th</sup> Avenue South-Thought information was up-to-date and useful, would like to see a chart with milestones and would like information on zoning/acquisition. Would like to be purchased. Would like a reply

### **General Comments**

It would be nice to have a view point on 152<sup>nd</sup> Avenue South and 24<sup>th</sup> Avenue South.

**Appendix Six. Comments Received from Open Houses**

**Seattle-Tacoma International Airport  
Federal Aviation Regulation (FAR) Part 150 Study**

Thank you for taking the time to comment on this FAR Part 150 Study. You may submit your comments to the address below:

Barnard Dunkelberg and Company  
c/o Mr. Michael West  
1122 E. Pike Street, #1286  
Seattle, Washington 98122

Comments will be accepted at this address through the end of the Study. You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net).

**Comments:**

Why haven't we heard about this sooner. Study began 12/97!  
The rerouting of traffic over Seward Park is a violation  
of 100 yrs of park protection. This park is very  
remarkably similar to its original state -- how  
reckless of the Port to sacrifice it now. ALSO, many  
more people, under this proposal, will be damaged  
by noise than presently. We can't continue  
uncontrolled growth of air traffic if this is the  
result. Am writing to Rep. Petz.

**Optional:**

Name:  
Address (City, St):  
Phone:  
Fax:

RYK'S COPIES

JAN 28 2000

## Comments

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Michael West  
1122 E. Pike St. #1286  
Seattle WA 98122

At any time.

You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net).

### Comments:

I was shocked to hear of the threat to our quality of life here in our south end Mercer Is. home. We moved here for the peace and quiet of an "away from the city noise, hustle, bustle" environment. I love the quietness and serenity of my yard, garden, and home. I often wake up in the morning and just "listen to the quietness" of no planes, no traffic, and no horns, and I am thankful that we were able to afford to live here.

We paid lots for our home and pays lots in taxes.

I want the air traffic pattern to go back over the <sup>Puget</sup> Sound and return to the pre-1979-1980 energy crisis pattern west of land and peoples' homes.

Name:

Address (City, State, Zip):

Phone:

Fax:

E-mail:

Leeh Boman

8530 SE 82nd St

Mercer Is., WA 98040

206.232.0179

[caperplusb@aol.com](mailto:caperplusb@aol.com)

From Dec 8 Forum - City of Mercer Island / Port of Seattle

December 11, 1999

PART 150 COMMITTEE  
Mr. Michael West  
Barnard Dunkelberg & Co.  
122 East Pike Street  
Seattle, WA 98122

**RE: Proposal to Modify North Flow, East Turning Flight Track**

Dear PART 150 COMMITTEE,

As you may be aware, one postcard mailing advising of a December 8<sup>th</sup> meeting resulted in standing-room-only-attendance by hundreds of concerned Mercer Island residents regarding a proposal to modify the existing east turn flight track procedure. As I understand the Sub-Committee's current focus is on a "split track" proposal. As a citizen and resident of Mercer Island, I am extremely concerned about such an alarming proposal. Below are my comments:

**1. EXPAND UTILIZATION OF THE DUWAMISH CORRIDOR: GO WEST**

The Port of Seattle and the FAA should strongly consider other options, namely the West Turn over the Duwamish corridor and Elliott Bay. Efforts to maximize the use of south flow arrival and departures as well as to use "west turn" flight tracks under north flow conditions should be given priority.

**2. MERCER ISLAND ALREADY RECEIVES TOO MUCH NOISE**

The current east turn procedure brings a significant amount of noise of North Mercer Island. This turn should be eliminated entirely and planes routed West. At the least, the present East Turn curfew hours should be extended. *Before the mid- to late-1970's no planes existed to the east. They all went to the west and then south. The routing to the east was supposed to be temporary and its advisability was disproved; yet it continues to this day.*

In addition, the South end of Mercer Island, only a few miles from the end of the SeaTac runway, frequently hear engine run-ups and take off noise from departing aircraft at both Boeing Field and SeaTac. Unlike other communities, Mercer Island residents are also impacted by noise from Boeing Field, the Renton Boeing plant aircraft departures, and the Renton general aviation and seaplanes airport.

**3. QUALITY OF LIFE AND PROPERTY VALUES WOULD SUFFER**

More jets mean more pollution fumes and heavy particulate. As a resident of Mercer Island, I am directly concerned about the increased pollution of 125 commercial jets flying over the island, not to mention the habitat disruption to wildlife such as the bald eagles which nest on the island and at Seward Park. Students in school classrooms would have to alter their speaking to adjust to passing jet noise. People having simple conversation would be affected. Cats, dogs, squirrels, raccoons, even songbirds would be harmed by jet noise.

Many homes on Mercer Island are expensive properties, including that of billionaire Paul Allen and his mother. I would personally move elsewhere if my home environment were ruined by jet noise and pollution. Can you imagine a realtor showing clients a property and having to stop speaking while a jet roars overhead and the windows rattle? Can you imagine living there?

I expect that the Port of Seattle and the FAA will adhere to standards of rigorous environmental review and analysis, requirements of NEPA and SEPA including technical analysis and public review and comment.



#### 4. MORE PEOPLE WOULD BE HURT THAN HELPED

The data from the flight track alternatives study clearly predicts that the split east turn would not provide true noise "relief" for the region and instead would hurt far more people than it helped.

Residents of Mercer Island, Rainier Valley, Seward Park, South Bellevue, Renton, and Eastgate would bear essentially the whole brunt of this increased exposure for the entire area population. The overall impact on the region will be to increase by 23% the total population exposed to noise levels that could affect speech 10 to 30 minutes per day. Six to nine times more people would be hurt by the proposed split turn than those who may expect only partial relief.

This study also examined the total regional population exposed to cumulative, annoying day-night noise levels on north flow days. Seven times as many people will experience significantly MORE noise than those who may expect only partial relief will. The total population exposed to potential night awakenings will increase by over 30%.

#### 5. SPLIT TRACK MOVES FLIGHTS OVER MORE HEAVILY POPULATED AREAS AT LOWER ALTITUDES

The southern track would direct 55% of east turning aircraft from current "over water" Lake Washington crossings to a path directly over Seward Park, the middle of Mercer Island, South Bellevue, Newcastle and North Renton. The entire turning process for the southern track would also come at a substantially lower altitude, in the 3/4000 feet range, regardless of whether the eight-mile distance from SeaTac has been achieved. Noise level is inversely proportional to the square of the distance (altitude in this case). Thus a jet at 3000 feet is 4 times noisier than at 6000 feet. The procedure would impact large populations at much higher levels of noise than otherwise happens under existing procedures. I am afraid if the door is opened to this, somewhere along the line a landing glide path will be added also.

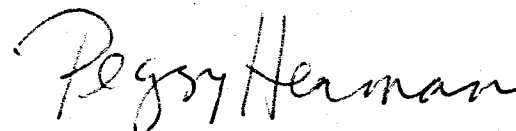
#### 6. REPRESENTATION

To my knowledge, there is no sub-committee member living on Mercer Island nor any of the communities, that would be adversely affected by the split track proposal. There has been no effort by the District 6 representative to meet with the citizens of Mercer Island and understand our interests and concerns.

**As a result of the above-identified negative impacts on this community, I am voicing my strong opposition to an adoption of the split track procedure.**

Thank you for the opportunity to provide input on this matter.

Sincerely,



Peggy Herman  
3076 - 65<sup>th</sup> Place SE  
Mercer Island, WA 98040



**Seattle-Tacoma International Airport  
Federal Aviation Regulation (FAR) Part 150 Study**

Thank you for taking the time to comment on this FAR Part 150 Study. You may submit your comments to the address below:

Barnard Dunkelberg and Company  
c/o Mr. Michael West  
1122 E. Pike Street, #1286  
Seattle, Washington 98122

Comments will be accepted at this address through the end of the Study. You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net).

**Comments:**

I live in the Seward Park neighborhood and would like to take the time to say I am very much against the proposed flight ops. I do not want our neighborhood destroyed by noise pollution and believe that 'spreading out' the problem is not going to solve anything. It is only going to ruin another nice Seattle neighborhood.

Sincerely,  
Kenji McCullough

**Optional:**

Name: Kenji McCullough  
Address (City, State, Zip):  
Phone:  
Fax:

Seattle-Tacoma International Airport  
Federal Aviation Regulation (FAR) Part 150 Study

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Comments:

It is distressing that the Port has begun a process to investigate implementing a dramatic change in the current flight paths over Seattle — without notifying the neighborhoods that would be impacted (i.e., SE Seattle)! This is unacceptable. (Many of us just recently became aware of our plans only due to a Seattle Times article).

We already have enough noise from Boeing Field, Renton Airport, and jets directly over nearby Beacon Hill!

We chose to buy our home here (in SE Seattle) because it was not directly under a major flight path — that's why we wouldn't consider buying on Beacon Hill.

Do not put a flight path over SE Seattle. If you need to make a change, then send flights over the Duwamish industrial area & over the un-populated Elliott Bay!

Optional:

Name: JIM MCCULLOUGH  
Address (City, State, Zip): 5132 S. Farrar, Seattle WA 98118  
Phone: —  
Fax: —

## Comments

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Michael West  
1122 E. Pike St. #1286  
Seattle WA 98122

At any time.

You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net).

Comments: See attached  
letter to the Editor -

### Optional:

Name:

Address (City, State, Zip):

Phone: \*

Fax: 425-454-1613

E-mail: [Jgropp@MSN.com](mailto:Jgropp@MSN.com)

PATTY & JERRY GROPP

7620 SOUTHEAST 72nd STREET<--

MERCER ISLAND, WA 98040-5319

USA

(206) 232-3127

go

JERRY GROPP ARCHITECT AIA PS

11661 SE FIRST STREET SUITE #201

BELLEVUE, WASHINGTON 98005

USA

\* (425) 454-4500

From Dec 8 Forum - City of Mercer Island / Port of Seattle

**FAXED**  
12/9/99  
Jane Editor  
MI Reporter

JERRY GROPP ARCHITECT AIA PS  
11661 Southeast First Street Suite 201  
Bellevue, Washington 98005-3531  
office phone- (425) 454-4500  
office fax----- (425) 454-1613  
WebPage- <http://www.rockisland.com~jerrygropp>

Mercer Island Residence- 7620 SE 72nd Street

Re: The Flight Track Alternative as it affects Mercer Island (as well as the Eastside).

As a retired light plane pilot (having flown for twenty five of the thirty five years I've lived on Mercer Island), I know well- having flown it many times- the proposed "Split East Turn". This ill-concieved idea would reroute airline traffic over the middle of Mercer Island at low altitudes.

While small airplanes are bad enough, large, heavily loaded jet airliners working hard to climb to altitude are much worse. FAA noise abatement requirements are really of little effectiveness. And we all know this really bothersome and noisesome air traffic will increase exponentially.

The myriad numbers and statistics, computer simulations are all very fine, but what's needed is a preannounced demonstration flight of a Stage 3 jet over the "Split East Turn". This has been done before, and again would amply illustrate the horrendous real-time impact of this proposal.

REGISTERED ARCHITECT  
JERRY GROPP  
STATE OF WASHINGTON  
12/9/99

Subj: Dec. 8 Forum-City of Mercer Island/Port of Seattle  
Date: 12/10/99 4:01:34 PM Pacific Standard Time  
From: DEMatthews  
To: mjwest@prodigy.net

Dear Mr. West:

I have several comments to make about the proposed change in the North flight path from SeaTac airport. 1. The Citizen Committee was not an unbiased committee and I think that their recommendations should be viewed with some skepticism. I say this because the representative of Councilman McKenna's district, Dr. Rudolph, had an agenda from the beginning. He wanted a diversion of flights away from his residence, Medina. He has been working for that result for at least ten years and did not represent all of the residents of the district. 2. I do not think enough attention has been paid to the fact that turns over Mercer Island will be made at a much lower altitude than they attain when flying further north. In the material handed out I did not see any reference to altitude. 3. I do not think that enough consideration has been given to the proposal to fly over the Duwamish basin followed by a westerly turn. This would solve the problem for the entire Eastside without diverting planes over someone else's neighborhood.

I do appreciate the staff members taking their evening to make the presentation on Mercer Island.

Duane E. Matthews  
7817 SE 75th Place  
Mercer Island, WA 98040-5501  
206-232-0084

Dear Mr West,  
Here is a hard copy of my E-mail comments following  
the Mercer Island Forum. I sincerely believe that the  
"Citizens" committee was a sham.

*Duane E. Matthews*

## Comments

Thank you for taking the time to comment on what you have seen and heard at tonight's open house. You may submit your comments now in one of the boxes marked "Comments", or you can mail them to:

Michael West  
1122 E. Pike St. #1286  
Seattle WA 98122

At any time.

You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net).

### Comments:

I have ATTENDED TWO MTGS., ONE AT SEATTLE IN OCT AND ONE ON MERCER ISLAND IN DEC.

I FEEL VERY STRONGLY THAT UNLESS MERCER ISLAND IS REPRESENTED ON THE COMMITTEE BY OTHER THAN DR. RUDOLPH (ANYONE WOULD BE INCAPABLE OF <sup>FAIRLY</sup> REPRESENTING TWO COMMUNITIES SIMULTANEOUSLY WHEN ONE STANDS TO GAIN BY THE SPLIT TURN AND ONE LOSE), THE WORK OF THE PORT AND THE CONSULTANTS WILL BE A SHAME AND A LAW SUIT WILL FOLLOW.

Optional:

Name: Debbie Zike  
Address (City, State, Zip): 6104 - 84th Ave SE Mercer IS  
Phone: 206 232 3686  
Fax:  
E-mail: [dzike@gte.net](mailto:dzike@gte.net)

From Dec 8 Forum - City of Mercer Island / Port of Seattle



**Seattle-Tacoma International Airport  
Federal Aviation Regulation (FAR) Part 150 Study**

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**Comments:**

THIS IS A NOTE TO EXPRESS MY CONCERN REGARDING THE POSSIBILITY OF CREATING 2 HEAVILY TRAVELLED AIR CORRIDORS OVER SEATTLE INCLUDING THE SENARD PARK NEIGHBORHOOD AND MERCER ISLAND TO THE EXISTING AIR CORRIDOR. THIS PROPOSAL WILL INCREASE THE NUMBER OF PEOPLE EXPOSED TO JET NOISE. MY BELIEF IS THAT EFFORTS SHOULD BE MADE TO DIRECT AIR TRAFFIC WESTWARD OVER PUGET SOUND.

*Edward Martinez*

**Optional:**

Name: EDWARD MARTINEZ  
Address (City, State, Zip): 5130 - S. LUCILLE  
Phone: SEATTLE, WA 98118  
Fax: 206.722-7398  
FAX 206 723-1884

Seattle-Tacoma International Airport  
Federal Aviation Regulation (FAR) Part 150 Study

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Seattle, Washington 98122

Comments will be accepted at this address through the end of the Study. You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net).

**Comments:**

Study based on False Assumptions —

1) DNE, TA, SEL incomplete because do not include Flight Tracks / noise of traffic from Renton and Boeing Fields

2) Population density maps inaccurate (our own block has 12 new houses in a 10 house radius of our house — our area has had a building boom!)  
Noise impact  
Sits are  
NOT represented

**Optional:**

Name: Maureen and Philip O'Reilly  
Address (City, State, Zip): 4847 S. Graham Street  
Phone:  
Fax: Seattle, WA 98118

(206) 725 1264

3) Affected populations should include citizens enjoying OPEN SPACES of Lake Washington Blvd and Seward Park as well as NESTING EAGLES in Seward Park.

Seattle-Tacoma International Airport  
Federal Aviation Regulation (FAR) Part 150 Study

Thank you for taking the time to comment on this FAR Part 150 Study. You may submit your comments to the address below:

Barnard Dunkelberg and Company  
c/o Mr. Michael West  
1122 E. Pike Street, #1286  
Seattle, Washington 98122

Comments will be accepted at this address through the end of the Study. You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net).

Comments:

- we want someone from Mercer Island on the Citizen Advisory Com.
- Do not consider the split track proposal - this creates more noise at lower altitudes
- Mercer Island already receives its' share of noise from ~~the~~ the current east turn procedure - please do not increase the noise by changing pattern.
- An Environmental Review must happen before any changes
- Look at other solutions - for example West Turn over  
Optional: Duwamish + Elliott Bay

Name:

Address (City, State, Zip):

Phone:

Fax:

Tewy Storms

Janet Dindia

4240 Shoreclub Dr.

Mercer Island, WA 98040

Ph: 206-232-7547

Fax: 206-275-1038

# Burton L Sternoff

3864 West Mercer Way, Mercer Island, WA 98040 Tel (206) 232-7933

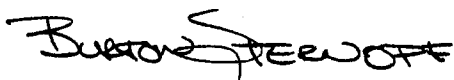
Date December 16, 1999

To Barnard Dunkelberg & Company  
c/o Michael J West  
1122 East Pike Street  
Seattle, WA 98122

Re Proposed Flight Pattern Changes  
Part 150 Study Committee Port of Seattle

I am writing this letter to register my opposition to changes in the aircraft flight pattern originating out of SeaTac International Airport. I am particularly opposed to the change in the flight pattern which shortens the north turn and brings flights across and over Mercer Island. My concerns are noise and safety.

Sincerely,



Burton L Sternoff  
3864 West Mercer Way  
Mercer Island, WA 98040

**Seattle-Tacoma International Airport  
Federal Aviation Regulation (FAR) Part 150 Study**

Thank you for taking the time to comment on this FAR Part 150 Study. You may submit your comments to the address below:

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c/o Mr. Michael West  
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Seattle, Washington 98122

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**Comments:**

Please take into account that we, in Seward Park, get plenty of noise from two other airports: Boeing and Renton. We came to this area 40 years ago for the peace and quiet. What are you doing to us.

**Optional:**

Name:

Michal Jacoby

Address (City, State, Zip):

5750 S. Hawthorn Rd

Phone:

206 723 1427

Fax:

Michal Jacoby  
5750 South Hawthorn Rd.  
Seattle, WA 98118

Robert G. Stagman, M.D.  
Gail L. Stagman, Attorney-at-Law  
7401 92nd Place Southeast  
Mercer Island, Washington 98040  
E-mail zevdog@zipcon.com  
Phone 206-232-4867  
FAX 206-236-9968

December 13, 1999

Mr. Michael West  
Barnard Dunkelberg & Co.  
1122 East Pike Street  
Seattle, WA 98122

Dear Mr. West:

Enclosed please find a copy of our letter to Mr. Ron Seymour concerning the Sea-Tac Part 150 Noise Compatibility Study. As you can see, we are deeply concerned about the proposed "Split Track" alternative flight pattern for north flow, east turning aircraft leaving Sea-Tac airport. We believe that this proposal is deeply flawed, unreasonable, and violates the parameters which have been established to guide any deliberations on altering the existing flight patterns. The rationale for our concerns is set forth in the letter.

We trust that you will add this letter to your citizen input regarding this very contentious and volatile issue. Thank you for your consideration.

*Robert G. Stagman, M.D.*  
*Gail L. Stagman*

Robert G. Stagman, M.D.  
Gail L. Stagman, Attorney-at-Law  
7401 92nd Place Southeast  
Mercer Island, Washington 98040  
E-mail zevdog@zipcon.com  
Phone 206-232-4867  
FAX 206-236-9968

December 13, 1999

SeaTac Part 150 Noise Compatibility Study  
Citizen Advisory Committee  
Attn: Mr. Ron Seymour  
Seattle-Tacoma International Airport  
Noise Abatement Office  
P.O. Box 68727  
Seattle, WA 98168

Re: Proposal to Modify North Flow, East Turning Flight Track

Dear Mr. Seymour:

We are writing to you to register our profound concern over the "Split Track" proposal being considered by the Sub-Committee which would route an incredible volume (55%) of northbound, east turning air traffic from Sea-Tac airport at unacceptably low altitude over densely populated areas of Seward Park, Mercer Island, Newcastle, South Bellevue, and North Renton. Our concerns and objections are based on the following points:

1) There is no current member of the sub-committee who resides in any of the areas which would be most affected by the proposal, namely Mercer Island, Newcastle, or South Bellevue. The Legislative District 6 representative, Dr. Robert Rudolph, is a Medina resident whose focus has been to route air traffic away from his home area to other areas, and who has made no effort to meet with Mercer Island residents.

2) The proposal directly violates a number of guiding policies under which the committee is mandated to operate:

a) "The proposed Part 150 noise mitigation program will improve the overall noise environment, not shift noise from one residential community to another". In fact, the split track proposal WORSENS the overall noise environment and directly shifts noise from one community to another. Data from the flight track alternatives study are very clear. Under the split track proposal: the south track will cross populated areas at much lower altitude (approx. 3000 feet) than previously (approx. 6000 feet) generating four(4) times the noise at ground level; the total population exposed to noise that could disrupt spoken communication for 10-30 minutes/day increases by 23%; the total population exposed to potential night awakening from noise increases by 30%; compared to the number of people who experience partial noise relief, 6-9 times more people are exposed to higher and more disruptive levels of noise with residents of Mercer Island,

Rainier Valley, Seward Park, South Bellevue, and North Renton bearing the brunt.

b) "Programs which benefit a community without adversely affecting another community will be given priority". Slightly reducing the noise impact for communities affected by the current flight pattern by greatly increasing the noise impact for much larger numbers of people in those communities affected by the split track proposal is a clear violation of this policy.

c) "Programs reducing the highest residential community noise levels without adversely affecting another community will be given priority". By having east turning aircraft on the south track cross residential areas at lower altitude, HIGHER noise levels will be imposed on different communities than those communities currently affected.

3) Mercer Island already receives a significant volume of noise from aircraft. The current east turn path generates significant noise over north Mercer Island. The south end is affected by noise from Sea-Tac, Boeing Field, the Renton Boeing plant, and the Renton general aviation and seaplane airport.

4) The adverse environmental impacts of the split track proposal on Mercer Island with high aircraft volume (125 aircraft/day at current projection) crossing the island at lower altitude are completely unaddressed, and such environmental review is mandatory. Of particular concern is the effect on our resident bald eagle population as well as those in Seward Park. Also of serious concern is the speech disruption likely to occur at Lakeridge and Island Crest Elementary Schools and at Mercer Island Middle School, all of which lie directly under the south turn.

5) The expected adverse impacts of the split track proposal are bad enough under current aircraft volumes originating from Sea-Tac airport. Of unknown, and much more devastating impact, would be the effect were the third runway to be built with a massive increase in volume.

6) There has been only lip service paid by the Port of Seattle and the FAA to the only reasonable choice for reducing the impact of aircraft noise on residential communities from north flow traffic out of Sea-Tac: TURN WEST over the Duwamish corridor and Elliott Bay as was done before and abandoned, as we understand, at the time of the fuel crisis which no longer exists.

The split track proposal is unreasonable and violates all of the parameters established for altering the existing aircraft flight pattern. If any change is to be made, it must either be a "fanning out" of departing north flow aircraft to truly disperse the noise, which has already been rejected by the FAA, or a return to the west turn over industrial/commercial rather than residential areas, which is clearly the best solution.

Thank you for allowing us to submit this input to the process.



Seattle-Tacoma International Airport  
Federal Aviation Regulation (FAR) Part 150 Study

Thank you for taking the time to comment on this FAR Part 150 Study. You may submit your comments to the address below:

Barnard Dunkelberg and Company  
c/o Mr. Michael West  
1122 E. Pike Street, #1286  
Seattle, Washington 98122

Comments will be accepted at this address through the end of the Study. You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net).

Comments:

BECAUSE THE AIRCRAFT WILL BE  
AT A LOWER ALTITUDE OVER  
MERCEY ISLAND IT IS NOT A  
"FAR" SPREADING OF THE NOISE.  
I STRONGLY OBJECT TO THIS  
PROPOSED CHANGE!!

Optional:

Name: J

Address (C

Phone: 206 732-8980

Fax:

Jim & Marion Peterson  
6316 84th Ave SE  
Mercer Island, WA 98040-5338

JPETE1344@AOL.COM

Diane C. Simperman  
5609 80th Ave. SE  
Mercer Island, Wa. 98040  
Phone 206 - 232 - 6549  
Fax 206 -236 - 0905

December 9, 1999

Michael West  
1122 E. Pike St. #1286  
Seattle, Wa. 98122

Dear Mr. West:

This is a comment sheet from the Dec. 8 Forum - City of Mercer Island/Port of Seattle.

I live on the west side of Mercer Island, directly across from the fish hatchery at Seward Park. We are very close to Groveland Park on Mercer Island.

Senator Jim Horn had excellent comments last evening. Please listen to them closely. One of his points was the noise pollution the Island already lives with. Let me address this comment in relation to our home. First, the noise from Boeing Field. We can hear many of the planes taking off from the field. They are quite loud. When Boeing is testing airplane motors, there is a constant drone and rumble in our environment. Right now, as I sit writing this, I am listening to this noise and to planes taking off. Over the years we have lived here, I cannot tell you the number of times the rumble of this sound has awakened me during the middle of the night and this is with our bedroom windows closed. Medina gets none of this. There is a sea plane business at the south end of the lake. They use the channel between Mercer Island and Seward Park for their runway. More importantly, they use this channel for flight lessons. This means many take-offs and this is such a horrible noise that if I am on a phone call, I must stop the conversation until the take-off has been completed.

Then there is the first week of August, Tuesday through Sunday when the Blue Angels are in town. They literally fly right over the deck of our home. I can see the pilot's face! One year I forgot they were coming. They flew so close to our home I literally hit the kitchen floor because I thought a plane was crashing into our house. After I picked myself up off of the kitchen floor with my heart pounding in my chest, I went to the phone and called the tower at Boeing Field.

In the recent months, we have had planes coming in for landing at Sea-Tac, and these planes are directly over our house. It is obvious they are making the maximum effort to fly quietly but they are there. Two nights ago for the first time I heard a plane taking off flying over our house. This was new.

I do not want any planes fully loaded with fuel, people and their luggage flying directly over my home on take-off. These planes should turn west and go over Elliott Bay and the Duwamish.

In my thirty-five years on Mercer Island, I have never seen such a large crowd turn out as was at Mercer Island High School last evening. Based on the size of that crowd, I think the Port of Seattle is in real trouble if they pursue this east turn over Mercer Island. Thanks for listening.

*Diane Simperman*

7970 Seward Park Ave South  
Seattle, WA 98118

December 15, 1999

Barnard Dunkelberg & Co  
c/o Mr. Michael West  
1122 East Pike Street  
Seattle, WA 98122

Dear Sir or Madam,

We have learned of a plan to route many south-bound Seatac departures so that they fly over Seward Park. As residents here, we are gravely concerned. To have planes flying over at relatively low altitudes would be VERY intrusive and unpleasant. We are not opposed to having a fair share of planes overhead, but do not want any more than necessary, and feel the load should be divided among neighborhoods. In addition, consideration should be given to the fact that the planes would be much lower and louder passing over our neighborhood and park than they would be if routed over Madrona or other more northern neighborhoods. Please make a different plan.

Sincerely,

  
Laura Pierce

  
Lorie Hamel

## Comments

Thank you for taking the time to comment on what you have seen and heard at tonight's open house. You may submit your comments now in one of the boxes marked "Comments", or you can mail them to:

Michael West  
1122 E. Pike St. #1286  
Seattle WA 98122

At any time.

You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net).

### Comments:

1. Delay the Port Decision for 3 months to allow Mercer Island & other affected communities to have representation.
  2. Add Mercer Island Representation.
  3. Do not consider any flight turns at lower altitudes.
  4. Determine effect of Flight turns on Mercer Island Schools = 20 flights/m. Delay school hours concentrated over the elementary & middle schools.
  5. Look at Duwamish Outlet
  - Optional: 6. Fly West
  7. ~~Boeing Co~~ to FMS route to keep planes over the water M.I. 9805
- Name: Tom Trumble  
Address (City, State, Zip): 8144 West Mercer Way M.I. 9805  
Phone: 230-4177  
Fax:  
E-mail: [trumble@u.washington.edu](mailto:trumble@u.washington.edu)

From Dec 8 Forum - City of Mercer Island / Port of Seattle

## Comments

Thank you for taking the time to comment on what you have seen and heard at tonight's open house. You may submit your comments now in one of the boxes marked "Comments", or you can mail them to:

Michael West  
1122 E. Pike St. #1286  
Seattle WA 98122

At any time.

You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net).

### Comments:

All communities involved in the citizens' group (as per Dr. Leonard's comments) agree that the Duwamish corridor is preferred. What we need to do is co-operate in opposing the FAA's "No" to such a solution, rather than disperse our efforts fighting amongst our communities. Surely there are low-populated routes to turn east b/w Seatac + the Bay Area

I think all Seattle communities should pool resources and take on the FAA in Washington, DC. This would be expensive but a cost proposal for this route would be appreciated.

### Optional:

Name: CAROL DAYTON BRIAN BYLENOK  
Address (City, State, Zip): 2735-63RD AV SE  
Phone: 232-5984  
Fax:  
E-mail: [cdayton@usa.net](mailto:cdayton@usa.net)      [BRIANB@EISI-MW.COM](mailto:BRIANB@EISI-MW.COM)

From Dec 8 Forum - City of Mercer Island / Port of Seattle

## Comments

Thank you for taking the time to comment on what you have seen and heard at tonight's open house. You may submit your comments now in one of the boxes marked "Comments", or you can mail them to:

Michael West  
1122 E. Pike St. #1286  
Seattle WA 98122

At any time.

You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net).

### Comments:

Noise effect on 2 elementary schools + a middle school will increase greatly with 110 planes a day flying over Mercer Island at 3000 Ft - 5000 Ft. With the 3rd runway it will be even greater. You need to look into going further N - past the incoming flight path so planes are higher or going back to flying west over water.

### Optional:

Name: Sylvia Bailey  
Address (City, State, Zip): 6076 77th Ave SE MI 98040  
Phone: 236 1239  
Fax:  
E-mail: [sylvia1953@aol.com](mailto:sylvia1953@aol.com)

From Dec 8 Forum - City of Mercer Island / Port of Seattle



December 8, 1999

Ron Seymour  
Part 150 Manager  
Port of Seattle  
P.O. Box 68727  
Seattle, WA 98168

Re: Written Comments – Sea-Tac Part 150 Noise Compatibility Study

Dear Mr. Seymour:

I am writing to note my concerns about the Part 150 study as currently proposed. My family and I reside at 6016 – 77<sup>th</sup> S.E. on Mercer Island and will be directly affected by this. While there is undeniably an element of “Not in my backyard” in my opposition to the Part 150 study, it goes beyond this. The Split Track data show no improvement in overall noise and noises clearly shifted to other communities. My specific concerns are as follows:

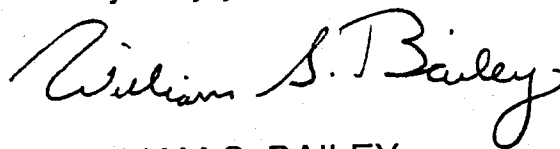
1. Despite the guiding policy of the committee that the program “Will improve the overall noise environment, not shift noise from one residential community to another,” that is exactly what is being done here.
2. The study does not include the most significant potential benefit of routing more planes up the industrial Duwamish Valley and out over the sound to the west.
3. Turning aircraft closer to Sea-Tac at lower altitudes will be harmful to close-in communities which now experience high noise levels from air traffic.

Ron Seymour  
December 8, 1999  
Page - 2

4. The study does not account for other significant noise sources such as Boeing Field and the Renton Airport.
5. The study does not project the impact of quieter aircraft coming into service.
6. The Part 150 Committee does not sufficiently represent eastside communities.
7. The proposed Split Track has very little to objectivity recommend it. An increased percentage of the population will be exposed to increased noise levels under this plan.

There are other better ways to accomplish the objectives here. The Part 150 study is deeply flawed. I would like to see the inclusion of more people from my community in the planning process to correct these flaws. Thank you for your attention to this matter.

Very truly yours,



WILLIAM S. BAILEY

WSB/smi



**Seattle-Tacoma International Airport  
Federal Aviation Regulation (FAR) Part 150 Study**

Thank you for taking the time to comment on this FAR Part 150 Study. You may submit your comments to the address below:

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c/o Mr. Michael West  
1122 E. Pike Street, #1286  
Seattle, Washington 98122

Comments will be accepted at this address through the end of the Study. You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net).

**Comments:**

*If public comment is an equal force to the CAC, I propose: Pick a day - summer, calm weather, 8,000 foot cloud ceiling, and unannounced (or announced) run the Split East Turn. Feedback on actual impact will be far more tangible than projections from a computer model and be true public comment.*

**Optional:**

Name:  
Address (City, State, Zip):  
Phone:  
Fax:

Seattle-Tacoma International Airport  
Federal Aviation Regulation (FAR) Part 150 Study

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c/o Mr. Michael West  
1122 E. Pike Street, #1286  
Seattle, Washington 98122

Comments will be accepted at this address through the end of the Study. You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net).

**Comments:**

My family is new to Mercer Island and since living here we have been significantly surprised if not shocked by the current level of aircraft noise over the island including variable low flying jets, night time low frequency rumbling that wakes us up at night. Increasing the traffic can only make the situation worse.

**Optional:**

Name: Chip Vollets  
Address (City, State, Zip): 8400 SE 72nd St., MI, 98040  
Phone: 206-275-4264  
Fax: 206-275-0074

Seattle-Tacoma International Airport  
Federal Aviation Regulation (FAR) Part 150 Study

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Seattle, Washington 98122

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Comments:

1. Please provide adequate representation for Mercer Island.
2. <sup>proposed -</sup> Flight Levels are too low
3. Please explore flight patterns to the West.
4. Impact over schools is huge.

**Optional:**

Name: MARY JO BRUCKNER  
Address (City, State, Zip): 4909 E Mercer, Mercer IS, WA 980  
Phone: 206.236.2529  
Fax: 206.236.2845

## Comments

Thank you for taking the time to comment on what you have seen and heard at tonight's open house. You may submit your comments now in one of the boxes marked "Comments", or you can mail them to:

Michael West  
1122 E. Pike St. #1286  
Seattle WA 98122

At any time.

You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net)

### Comments:

PLEASE DEAL W/ THE ISSUE OF AIRCRAFT  
NOISE - IT'S ESCALATING - THE ISSUE  
IS NOT WHERE WE CONCENTRATE ON  
DISPERSE THE NOISE. THE ISSUE IS  
THE NOISE! SHORT TERM FIXES THAT  
TAKE YEARS TO RE-CHANGE AND  
NOT SOLVING THE PROBLEM. M.I HAS  
LIVED THIS STORY BEFORE - WE ARE  
NOT GOING TO LIVE IT AGAIN!

### Optional:

Name:

Address (City, State, Zip):

Phone:

Fax:

E-mail:

From Dec 8 Forum - City of Mercer Island / Port of Seattle

## Comments

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Michael West  
1122 E. Pike St. #1286  
Seattle WA 98122

At any time.

You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net).

### Comments:

Please include a Mercer Island resident on future decision making committees. Noise abatement is more effective for everyone rather than push existing noise on newly affected residents.

### Optional:

Name: DAVE RIGBY  
Address (City, State, Zip): MERCER ISLAND WA  
Phone:  
Fax:  
E-mail:

From Dec 8 Forum - City of Mercer Island / Port of Seattle

Seattle-Tacoma International Airport  
Federal Aviation Regulation (FAR) Part 150 Study

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c/o Mr. Michael West  
1122 E. Pike Street, #1286  
Seattle, Washington 98122

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**Comments:**

*Please do not put the path over Mercer Island.  
It is far too concentrated on trees and we  
already have way too much noise.  
It's also a safety issue.*

**Optional:**

Name:  
Address (City, State, Zip):  
Phone:  
Fax:

## Comments

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Michael West  
1122 E. Pike St. #1286  
Seattle WA 98122

At any time.

You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net).

### Comments:

I would like a Mercer Island representative on the citizens committee who decides the eastern flight track of airplanes departing Sea Tac.

I also think the altitude of 3000-5000 ft. is far too low for excessive noise pollution in our community.

### Optional:

Name:

Address (City, State, Zip):

Phone:

Fax:

E-mail:

CAROLE KLEES

7515 S. E 16<sup>th</sup>

MERCER ISLAND WA

98040

206-232-6341

From Dec 8 Forum - City of Mercer Island / Port of Seattle

## Comments

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Michael West  
1122 E. Pike St #1286  
Seattle WA 98122

At any time.

You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net).

### Comments:

Keep it "as is" - give the flight crew as much altitude as possible before requiring them to initiate their turns -

### Optional:

Name: Mark Marshall  
Address (City, State, Zip): 7850 80<sup>th</sup> Place SE  
Phone: Mercer Island, 98040-5906  
Fax:  
E-mail:

From Dec 8 Forum - City of Mercer Island / Port of Seattle



**Seattle-Tacoma International Airport  
Federal Aviation Regulation (FAR) Part 150 Study**

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Seattle, Washington 98122

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**Comments:**

We were given too short a time  
to find out about the changes.  
The Duwamish Corridor sounds  
like the only viable alternative

**Optional:**

Name: Felicia Brooks

Address (City, State, Zip): 6227 Parkside Lane

Phone: 206-275-2584

Fax:

email [feliciabrooks@coldwellbankerbein.com](mailto:feliciabrooks@coldwellbankerbein.com)

Andrew Koerner  
Susan Maney  
4605 South Dakota Street  
(206) 725-1854

December 15, 1999

Barnard Dunkleberg and Company  
c/o Michael West  
1122 East Pike Street  
Seattle, WA 98122

Re: SeaTac Part 150 Noise Compatibility Study

This letter is in support of efforts to reduce the overall level of noise and flight congestion in the Rainier Beach, Lakewood/ Seward Park, and Leschi/Madronna areas of Southeast Seattle.

I am writing as a standing resident of the Lakewood community. On Tuesday, December 6 I was awoken from sleep at 2:30 a.m. by severe airplane noise. The severity of the noise, amplified by the plane's low altitude and the cloud cover indicated that the airplane was a cargo plane headed to Boeing Field. This experience, needless to say was disturbing and stressful. This kind of experience is unfortunately common with the increase in air traffic over my family's residence. Airplane noise has increased considerably. Airplane traffic is estimated to have increased as much as 60 % since 1990.

I am disturbed to learn that the primary option being considered in the SeaTac Part 150 Noise Compatibility Study to restructure flight paths and reduce air traffic noise is the split-east turn. This option would not reduce the overall amount of flights over the Rainier Valley but would instead divert flights further south from Leschi/Madronna to Columbia City / Seward Park.

This letter supports:

- 1: The study and incorporation of suggestions such as routing flight traffic over the Duwamish or Elliot Bay and the suggestion for fanning out patterns of flight to share the noise burden more equally through out Seattle and outlying areas. It is unacceptable that Rainier Valley areas alone should shoulder the burden of the solution.
- 2: A reevaluation of the split-east turn alternative looking at protecting Seward Park from noise pollution and protecting Seward Park wildlife from the likely adverse effects of increased noise and pollution.
- 3: An extensive outreach effort in the Rainier/Southeast Seattle to bring the issue to citizens and solicit feedback as outlined in Federal Executive Order 12898. The entire Rainier Valley areas should be brought into the study on this important issue.

Do not dump the jet noise problem on Seattle's lower income communities. Do not pit one south end neighborhood against another as the split-east turn does. HELP improve the quality of life in Southeast Seattle.

Sincerely,



Andrew Koerner

Karen Porter  
4730 3 Ferdinand  
Seattle WA 98118  
porter.k@mmindex.com

~~December 15, 1999~~

1/10/00

Barnard Dunkleberg and Company  
c/o Michael West  
1122 East Pike Street  
Seattle, WA 98122

Re: SeaTac Part 150 Noise Compatibility Study

This letter is in support of efforts to reduce the overall level of noise and flight congestion in the Rainier Beach, Lakewood/ Seward Park, and Leschi/Madronna areas of Southeast Seattle.

Airplane noise has increased considerably in my neighborhood. Airplane traffic is estimated to have increased as much as 60 % since 1990 resulting in this significant increase in airplane noise

This letter supports:

1: The study and incorporation of suggestions such as routing flight traffic over the Duwamish or Elliot Bay and the suggestion for fanning out patterns of flight to share the noise burden more equally through out Seattle and outlying areas. It is unacceptable that Rainier Valley areas alone should shoulder the burden of the solution.

2: A reevaluation of the split-east turn alternative looking at protecting Seward Park from noise pollution and protecting Seward Park wildlife from the likely adverse effects of increased noise and pollution.

3: An extensive outreach effort in the Rainier/Southeast Seattle to bring the issue to citizens and solicit feedback as outlined in Federal Executive Order 12898. The entire Rainier Valley areas should be brought into the study on this important issue.

Do not dump the jet noise problem on Seattle's lower income communities. Do not pit one south end neighborhood against another as the split-east turn does. HELP improve the quality of life in Southeast Seattle.

Sincerely,

Karen Porter

# Flightpath changes criticized

## Proposals could pit neighborhoods against one another

By Karen Kuever

The "NOMBY" effect has hit Southeast Seattle residents with a vengeance. After years of constantly increasing jet noise,

### South End

many residents are screaming "Not Over My Back Yard," to the current Port of Seattle plans to divert jet routes directly east over Columbia City, Lakewood and Seward Park. Most Southeast Seattle residents still are blissfully unaware that more than 50 percent of the southbound flights (on days when departures first head north) will be making their eastward turn directly over the heart of the Rainier Valley, if current proposals are approved by the FAA.

In fact, much of the public outcry concerns the fact that there has been little notification and public discussion on this issue, just weeks before the final recommendation could be made at a public meeting. Columbia City resident Ray Akers, involved for several years on the Seattle Council on Airport Affairs, maintains that the Rainier Valley is an easy target for increased "dumping of the area's jet noise," because it is a

lower-income community and does not have the voter turnout of other Seattle neighborhoods. He cites Federal Executive Order 12898, requiring an extra outreach to lower income neighborhoods when proposed changes may affect quality of life.

"The problem for Southeast Seattle continues to be that decisions are made by politicians without sufficient input from residents," Akers said.

A little background will explain what the proposed change entails and why it is being considered. Airplane traffic in and out of Sea-Tac has been increasing for years, commensurate with the area's phenomenal population and commercial growth. Studies have shown that jet traffic has increased 60 percent since 1990.

Every neighborhood along the flight paths, both north and south, has been increasingly affected. Departing flights pass over Southeast Seattle about 45 percent of the time on days when a "north flow" condition requires that southbound and eastbound flights first head north before turning.

Currently, this traffic turns east over the Leschi/Madrona area, then either continues eastward or turns south along the east side of Lake Washington. The people who live along these flight paths, and, of course, those on Beacon Hill, bear the majority of the noise.

With the increase in air traffic, residents declared the situation intolerable and organized a campaign to do something about it, pressing the Port of Seattle to consider alternative flight paths. Citizens for Airplane Noise Equality is a neighborhood group, working with the Seattle Council on Airport Affairs.

CANE's intent was to help find a way to minimize airplane noise by changing the flight paths so that neighborhoods share the noise more equally. The group's members also wanted to minimize noise over residential areas by having more flights routed over the industrial Duwamish corridor and over Elliott Bay.

The Port of Seattle hired a consulting firm to do an analysis, which they called the

▶ See PLANES, Page 3

Seattle Part 150 Noise Compatibility Study. Suggestions such as routing over the Duwamish or Elliott Bay, however, were not studied nor was another CANE suggestion to "fan out" the pattern so that no single area would be heavily impacted.

The only alternative that was analyzed was the "split-east turn," which would lighten the noise over Leschi but divert it farther south in the Rainier Valley. Under this proposal, north-flow flights would turn east three miles south of the current route, flying directly over the Columbia City historic area and east over Lakewood, Seward Park, Andrews Bay and the middle of the park itself.

## Amplified

Turning earlier, the jets would have reached an altitude of only 3,000 feet, rather than 10,000, raising concerns that any noise would be amplified by the closer proximity to the ground. Neighbors also voiced concerns that impacts from increasing Boeing Field cargo traffic already is creating a noise crisis in the area, and that issue was not factored into the study.

Residents such as Harry and Carolyn Stern, who moved to Seward Park for its peace and quiet and proximity to the park, are unhappy about the noise. Active in Friends of Seward Park, they raise a number of issues: Why was the loss of tranquility in Seward Park itself not factored into the consultants' report? Shouldn't some consideration be given to preserving our public parks from noise pollution and the accompanying adverse effects on park wild-

For other neighborhoods, specifically Leschi, Madrona, parts of Mount Baker and North Beacon Hill, the split-east turn would provide a respite to the relentless pounding of jet noise. This is an issue that threatens to pit neighborhood against neighborhood, if only one alternative is considered.

The Seattle Council on Airport Affairs continues to assert that other solutions can and should be studied, and the entire Rainier Valley area should be brought into the loop on this important issue before any decisions are made. The council's ultimate hope is that other neighborhood groups will join with them to work on equitable solutions to noise issues throughout the city.

There still is time for interested residents to find out more about the Port of Seattle's plans. The Lakewood/Seward Park Community Club will hold a special meeting on Thursday, Dec. 9, at 7 p.m. to specifically address the impact of the proposed change on the communities of Lakewood, Seward Park and Columbia City. The meeting will be held at the clubhouse, at 4316 S. Angeline St.

The Citizen's Advisory Committee planned to submit comments on the consultants' report to the Port by Monday, Dec. 6, and a recommendation could be made by the Committee at a public meeting on Jan. 18. Before changes can be implemented, approval must be granted by the Port of Seattle, and ultimately, the FAA. That process is expected to take some time to complete. But the time for community involvement and input is

now, say resident activists.

"This should never be an issue that splits neighborhoods in Southeast Seattle," Akers said. "The solution is not 'moving the noise' but fighting a different battle, insisting that people's quality of life is given equal weight to the needs of big business and the conven-

ience of the Port of Seattle.

If you cannot attend the coming public meeting, you can communicate in writing to the Part 150 Committee. Address your comments to:

Barnard Dunkleberg and Company

c/o Mr. Michael West

1122 East Pike St.  
Seattle, WA 98122

You may e-mail your comments to: MJWEST@prodigy.net. All comments become part of the public record of the Part 150 Study.

*Karen Kueber is a free-lance writer who lives in the Seward Park neighborhood.*

Sea-Tac International Airport Part 150 Study  
Public Open House  
Dec. 2<sup>nd</sup>, 1999

Comments

Thank you for taking the time to comment on what you have seen and heard at tonight's open house. You may submit your comments now in one of the boxes marked "Comments", or you can mail them to:

Michael West  
1122 E. Pike St. #1286  
Seattle WA 98122

At any time.

You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net).

Comments:

On your 1999 Contour Area you have area's in white that are not included in the sound proofing program. Please as a minimum include these area's in the program. We are already being impacted by the noise and when the third runway is completed it will compound the problem even more. Thank you for your assistance getting the additional area's included.

Optional:

Name:  
Address (City, State, Zip):  
Phone:  
Fax:  
E-mail:

*Les Bean*  
*24727-12TH AVE S.*  
*DES MOINES, WA 98198*  
*206-870-9640*

Sea-Tac International Airport Part 150 Study  
Public Open House  
Dec. 2<sup>nd</sup>, 1999

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Optional:

Name: Doris Bear  
Address (City, State, Zip): 24727-12th Ave. S. DesMoines, WA 98198  
Phone: 206-870-9640  
Fax:  
E-mail:

MARK AND PEGGY HAYES

8395 SE 53<sup>rd</sup> Place  
Mercer Island, WA 98040  
(206) 236-0129  
[mhayes2@uswest.net](mailto:mhayes2@uswest.net)  
December 29, 1999

---

Mr. Michael West  
BARNARD DUNKELBERG AND CO.  
1122 E. Pike Street #1286  
Seattle, WA. 98122

Dear Mr. West:

We are Mercer Island residents and homeowners who recently learned of the Port of Seattle's proposal to send jets over Mercer Island. Our first response was total shock, and has now turned to bitter outrage.

First of all, we are upset that most Mercer Islanders only learned about this proposal at the eleventh hour. By now, after the Mercer Island residents' overwhelming turnout and cry against the Port of Seattle's proposal to send jets over Mercer Island, you have hopefully heard from many of us who are violently against anything like this being instituted. We are writing to you to add our names to that list.

We are appalled that our District 6 representative, Dr. Robert Rudolph, who has a vested interest in diverting planes from flying over Medina to Mercer Island, was appointed as our representative and was then negligent in keeping our community informed. How could such a biased person be appointed to a position like this? We heard Mr. McKenna say that no one else offered to participate in this process, but we are certain that if Mercer Island residents had been apprised of this situation before it ever gained the momentum it has now, you would have had more volunteers than you would have known what to do with.

Obviously, there is a conflict of interest, as Dr. Rudolph has a vested interest in the Port's decision. He has been upset with the amount of jet noise over his Medina home for years. I can understand that, but proposing a solution that will not appreciably decrease the noise he is suffering from and will



adversely affect 447% more people if the proposal is accepted is absolutely ludicrous. Where is the wisdom in that line of thinking? The proposed change in flight paths will only partially decrease the noise that Medina is now suffering from and will shift the problem from one community to another. Is this a solution? Please! It does not begin to address the problem itself. Medina should not have to suffer from the airplane noise they are now exposed to, but Mercer Islanders should not have to suffer in their stead. A change such as that being proposed will obviously hurt many more than it will partially and minimally help.

First, and most obvious, jet travel over Mercer Island will cause a dramatic change in the tranquility of Mercer Island. Ask any newcomer to Mercer Island - they likely chose to move here because of the wonderful quality of life. Most of us here have chosen to pay higher real estate prices and property taxes in exchange for award winning schools and the peaceful, small community environment that Mercer Island has to offer. We carefully chose this community to raise our family for these very reasons. \

The flight path change will destroy what has been created here for generations and could result in big financial losses for many residents and ultimately, from those who profit from the high taxes we pay. It has been well documented that jet noise leads to lower property values. In some cases, property values have dropped 50 percent when new flight paths were created over communities that were peaceful prior to the change. How fair is this to impose on Island residents who have paid higher real estate prices/taxes to live in a tranquil, small community? Is it fair that Islanders will likely take large losses on the sale of their homes, should they have to move?

Those living in communities under the current flight paths purchased their homes knowing what they were getting into. Real estate prices in those areas reflect the issue of jet noise. If residents in those areas are complaining, they should have more closely researched their community prior to purchasing their home.

While Councilman McKenna has tried to remedy this with new committee appointments from Bellevue and Issaquah, it is too late for these two new voices out of twenty to have any real impact before January 19th when a recommendation will be submitted by the CAC. Despite the Consultant's reassurance that the CAC is not the only voice that is listened to, we find it disingenuous to call this a Citizen's committee when it is really a special

interest group.

The lack of any proposals to go west or north shows the lack of consideration of all possible options. The Duwamish Corridor could alleviate the current east turn noise without shifting it to, and severely impacting, other residential communities.

We feel the Port of Seattle Commission, the Consultants, Bernard Dunkleberg & Co., & the Citizen's Advisory Committee have all failed to honor their guiding policies to improve the overall noise environment and not shift noise from one residential community to another. The split east turn proposal violates both of these policies and should not be an option to be considered under any circumstances.

Also by violating their own guiding policies, they have deceived the communities affected by the split east turn without providing them any warning or representation on the Citizen's Advisory Community. While this may not have been intentional the results are inherently unfair and are made without representation of the entire community.

The 1987 study of scatter type flight plans such as the 'Split East Turn' showed this to be a flawed policy impacting far more people than corridor plans.

The Consultant's Part 150 noise impact data clearly discredits the Split Turn plan showing significant increases in the number of residents harmed and an increase in overall community airplane noise.

With Puget Sound so close by, why is it that jets cannot fly over lesser-populated areas? Would that not clearly be a win-win solution for all residents?

Our vote is that the Port of Seattle demand of the FAA that more north-departure flights be turned west, over the Duwamish flight abatement corridor. In addition, it is time to seriously consider a return to the departure rule that existed prior to the 1979 oil crisis: that departing flights be required to reach an altitude of 8,000 feet before turning. This would require an adjustment to flight patterns for incoming flights, but the change would be worth it for hundreds of thousands of residents.

While this may use a little more fuel, it will significantly improve the quality of life for all residents. We would be glad to pay a few more dollars for plane tickets in exchange for being able to live free of noise pollution.

Our final major concern underlies all of the above:

The CAC was selected by the Consultants;

The Consultants were hired by the Port Commission;

The Port Commission relies on its clients, the airlines for its income;

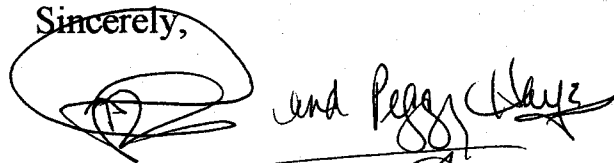
The airlines save money on fuel with the east turn & especially the split turn at the expense of citizens' quality of life.

We urge you to oppose this program and to do whatever is in your power to prevent the split turn proposal from taking effect.

We urge the committee of this study to consider these points and to extend the decision date. There is obviously much more that has to be considered than has already been taken into account.

We sincerely hope that the Port of Seattle commissioners and staff are as definitively opposed to the split turn proposal as we are.

Sincerely,

Handwritten signatures of Mark and Peggy Hayes. The signature for Mark is on the left, and the signature for Peggy is on the right, with the word "and" written between them.

MARK AND PEGGY HAYES

# Barbara E Sternoff

3864 West Mercer Way, Mercer Island, WA 98040 (206) 232-7933

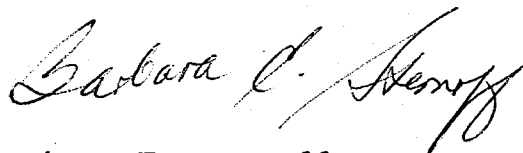
Date December 16, 1999

To Barnard Dunkelberg & Company  
c/o Michael J West  
1122 East Pike Street  
Seattle, WA 98122

Re Proposed Flight Pattern Changes  
Part 150 Study Committee Port of Seattle

I am writing this letter to register my opposition to changes in the aircraft flight pattern originating out of SeaTac International Airport. I am particularly opposed to the change in the flight pattern which shortens the north turn and brings flights across and over Mercer Island. My concerns are noise and safety.

Sincerely,



Barbara E Sternoff  
3864 West Mercer Way  
Mercer Island, WA 98040

*L. Lee Stanton*  
2659 Cascadia Avenue S.  
Seattle, WA 98144

December 31, 1999

Barnard Dunkleberg and Company  
c/o Mr. Michael West  
1122 East Pike Street  
Seattle, WA 98122

Dear Sirs,

As a resident of Mt. Baker for the past twelve years, and as a person who has worked in Seattle's Central Area for the past eight years, I am writing to offer my opinion about the proposed "east turn" revision to the SeaTac northbound flight pattern.

Under the current flight pattern, when I am at home, the north-bound traffic is annoying, especially during the warm weather of summer when my family and I spend more time outside, and have the windows open for ventilation. Frequently we must interrupt our conversations while the planes take off, often at intervals of less than less ten minutes.

At work, a few miles to the north, the noise from the take-off is much less noticeable -- in fact, less noticeable than the noise from the south-bound planes which are landing during bad weather.

Based on these direct personal experiences, I am writing to oppose the proposed "East turn" revision. It makes no sense to shift the east-bound turning pattern further south, where the noise from the jets turning at a lower elevation is much more intense. While I support the goal of "spreading the pain" of increased noise over a wider area, I do not support adversely impacting residential areas unnecessarily. It is particularly upsetting that no other alternative has been proposed for study, even though it appears that an east turn over a Husky Stadium/Kirkland/Redmond corridor would seem to make a lot of sense, at least to the lay observer. This route would be at a much higher altitude, and generate much less ground noise, than the currently proposed route.

Whatever the reasoning behind proposing the current east turn revision may be, my wife and I strongly oppose it; we equally strongly recommend that a more northerly "east turn" revision be examined as a more viable alternative, and effectively presented to all of the affected communities for their input.

Sincerely yours,



**Ted and Mary Ann Mandelkorn**  
**4811 Forest Avenue Southeast**  
**Mercer Island WA 98040**

**206.232.4464**  
**tedman@home.com**

December 27, 1999

Mr. Bernard Dunkelberg  
c/o Mr. Michael J West  
1122 East Pike  
Seattle, WA 98122


TO WHOM IT MAY CONCERN;

As a long time resident of Mercer Island, I am greatly disturbed by the recent recommendation of the Airplane Noise Abatement Committee to send a large number of jets departing from Seatac airport directly over Mercer Island, Eastgate, Kenndale Hill, and other heavily populated eastside communities. As a pediatrician who has practiced medicine in this area for over 27 years, I have always felt that the children of this area have enjoyed a haven of nature that clearly is conducive to good health of body and spirit.

I am having great difficulty understanding why this committee has the need to send so many planes over heavily populated bedroom communities, when it has large bodies of water and industrial areas that would be much better suited to absorb the noise of these planes. I fail to understand the wisdom of guiding these planes over the homes of families that would suffer immense negative impact from the noise generated by these planes. Noise levels have been documented in the past years with a great increase in decibels as planes pass overhead.

THERE MUST BE A BETTER SOLUTION!!!!

Sincerely,



Theodore Mandelkorn MD

James B. Gilchrist  
7430 SE 40<sup>th</sup> Street  
Mercer Island, WA 98040

December 19, 1999

Michael J. West  
Barnard Dunkelberg & Co.  
1122 East Pike Street, No. 1286  
Seattle, WA 98122

Re: Lower is louder

Dear Mr. West,

Why are we even considering transferring Medina's noise to Mercer Island when this violates Part 150 guidelines (mitigation will improve the noise environment not shift the noise to another residential neighborhood)? It also increases the noise in the turn area, Rainier Valley, Mt. Baker, Mercer Island, and South Bellevue by turning at a much lower altitude. Surely lower is louder.

Are the newly affected areas adequately represented on the citizens' advisory committee? Is there a representative on the committee from Rainier Valley, Mt. Baker, Mercer Island, and South Bellevue? If you have no citizens from the newly affected areas, you may have an easy consensus, but no credibility.

Rather than pitting residential neighborhoods against each other, why aren't we all seeking coordinated regional pressure on the Port and FAA to minimize noise impact on residential areas by turning west over the industrial corridor? This was an accepted departure route prior to the 70's fuel crisis.

Thank you for considering this.

Sincerely,



James B. Gilchrist

cc: Ron Seymour  
Rob McKenna

mercier Island, Wa 98040  
5216 W. Mercer Way  
December 16, 1999

Barnard Dunkelberg & Company  
c/o Michael J. West  
1122 East Pike St.  
Seattle, Wa. 98122

To Whomever is collecting public opinion statements concerning flight pattern changes:

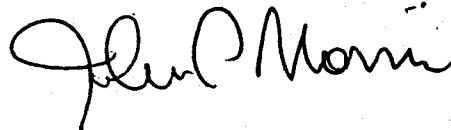
I read with great concern about proposals to re-route jet traffic over Mercer Island. A lower elevation turn is much louder than a turn at higher elevations, as currently over Medina. As family physicians, we are greatly concerned about this noise pollution as a public health issue.

We wish to hear discussion about the Duwamish/Elliott Bay corridor for jet traffic as an alternative to directing extreme noise pollution over the Eastside. Is there a truly practical reason or only a bureaucratic reason that this alternative is not being discussed? If it is necessary to route over the Eastside, how can a noisier, lower flight pattern be justified when a quieter, higher pattern exists?

We hope that those who make these difficult decisions will choose the way which impacts negatively the well-being of the least number of people.

Sincerely,

Karen S. Kaser, M.D.  
John P. Morris, M.D.



Karen S. Kaser

206-230-8456 hm

206-932-4321 wk



# Elaine L. Howard

December 20, 1999

Mr. Bernard Dunkelberg  
c/o Mr. Michael J. West  
1122 East Pike  
Seattle, WA 98122

Dear Sir:

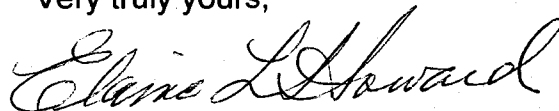
I am at a loss to understand the Airplane Noise Abatement Committee recommendation to send 100+ planes a day at a lower altitude over the center of Mercer Island. This is not noise abatement, but rather noise buildup!

Each time a jet warms up its engines in anticipation of takeoff at Renton Field, our windows shake and rattle prompting our guests to inquire if we are being attacked. There is enough water around here that planes can fly over, that it should not be necessary to send them at low altitude (and climbing, producing more engine noise) over my house.

If the committee is really supposed to be acting as its name implies, it should not be looking at sending high quantities of planes over any one area, but rather should be looking at ways to keep the planes over water and to spread them out as much as possible over non-residential areas.

When I was first married, we lived in the flight path in Des Moines--in fact planes used our apartment building to make their approach turn into Sea-Tac. Their headlights would make our living room like daylight in the middle of the night. There were a large number of planes that landed between 5 a.m. and 5:30 a.m. We were awakened by them every single day. We moved. I have lived here, in a home inherited from my parents, since 1973. I love it here. I don't want to have to move.

Very truly yours,



Elaine L. Howard

Sea-Tac International Airport Part 150 Study  
Public Open House  
Dec. 2<sup>nd</sup>, 1999

Comments

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Michael West  
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Seattle WA 98122

At any time.

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Esther Hunter  
24729 12th Ave. S.  
Des Moines, WA 98198

Name: E

Address (C

Phone: 206-878-3594

Fax:

E-mail:

Ave. S. Des Moines, WA, 98198

6520 S Hazel Street  
Seattle WA 98178  
January 3, 2000

Barnard Dunkelberg and Compan  
c/o Mr. Michael West  
1122 E. Pike Street, no. 1286  
Seattle WA 98122

Re: FAR Part 150 Study

There are a number of deficiencies that need to be addressed:

The Jan. 19 Sea-Tac Part 150 meeting at which consultants' recommendations will be given takes place at the same time as King County International Airport's Part 150 noise study community outreach meetings (Jan. 18, 19, 20). The KCIA meetings will present preliminary noise contours affecting Southeast Seattle neighborhoods. It is premature for consultants to make recommendations for SeaTac airport operational changes until noise impacts from KCIA's plan are considered. These two studies need to be coordinated and impacts of operational changes presented together to the affected communities.

Existing aircraft noise exposures for the communities to be impacted by the split east turn have not been adequately measured. Aircraft noise from Renton airport and King County airport already impact Southeast Seattle neighborhoods. Helicopter noise from King County Airport has not been factored in. These exposures do not affect Leschi/Madrona neighborhoods. Relieving one neighborhood by creating intolerable cumulative noise effects for another area is no solution nor is it "equity."

The split east turn proposal turns aircraft at lower altitude. Please furnish a gradient showing the increase in ground noise exposure per jet as a function of the altitude of the turn. This is crucial to evaluating a cost/benefit of turning planes at a lower altitude.

The consultants' stated priorities for operational changes are safety, efficiency and noise impacts (i.e. health), in that order. Jets negotiating a turn at lower altitude have less time in which to make corrections in the event they encounter a problem or mechanical failure. This poses a higher risk to passengers and to people on the ground. We do not see where this safety issue has been factored into the study.

Finally, Seward Park Natural Area, a place this community uses as a retreat from urban noise, and a place primarily used on clear i.e. north flow days, will be corrupted if split east turn is approved.

Donald Wieckowicz  
Mary Wieckowicz

*Donald Wieckowicz*  
*Mary Wieckowicz*

## Comments

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At any time.

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### Comments:

- (1) Sending Planes over Mercer Island only increases the number of people that are bothered by the noise.
- (2) The planes will turn sooner and at a lower altitude increasing the noise level at the ground.
- (3) The planes will turn over 3 to 5 public and 2 private schools and may require expensive noise proofing.
- (4) The hand outs at the public hearing were technical and required too much analysis before the reader could understand how the flight plans affected them.
- (5) The citizens committee represents only people who are in or near the current flight plan. You are not getting input from those in proposed flight plans. Therefore, the recommendations Optional: from the citizens advisory panel are likely to be biased and should not be considered representative.

Name: Greg Lipton

Address (City, State, Zip): 9301 SE 46 SE MI, WA 98040

Phone: (206) 230-0742

Fax:

E-mail:

From Dec 8 Forum - City of Mercer Island / Port of Seattle

- (1) Go back to the flight plan before the energy crisis.
- or
- (2) use existing flight plan
- or
- (3) send planes over Elliot Bay.

December 23, 1999

Barnard Dunkelberg and Company  
c/o Mr. Michael West  
1122 East Pike Street  
Seattle, Washington 98122

CC: Duane Anderson, Lakewood/Seward Park Community Club

This is my story:

In the spring of 1994, my husband and I purchased a house on Beacon Hill. Having lived in the north end for our first seven years in Seattle, we were relatively ignorant of the problem of plane noise and no one clued us into the Beacon Hill situation. We noticed some late night car traffic and some plane noise in our preliminary explorations of the neighborhood, but, it would have taken sleeping there overnight to really understand the extent of the problem—unlikely, since we were strangers to the area. Our foremost thought, relative to the prospect of having a home after renting for umpteen years, was that we were lucky to find such an aesthetically agreeable first house, and one with a studio space, in a diverse neighborhood!

I am an author and teaching artist so I write at home. We fixed up the studio which was originally set up for a painter. We labored for months to improve the space and the results were quite satisfying. The previous owners had done some very creative re-designs on the main part of the house and the view of the mountains topped off what we thought would be a fortunate domestic situation.

We were very happy in the house with a few exceptions. There was a gun-toting drug dealer living on the next block and, soon after we moved in, we were quite pre-occupied, for two years, with other concerned neighbors and the police department to change the situation. It's not that we didn't notice the plane noise but our attention was tuned to the most immediate threat. We got to know our neighbors a couple times over because after the meetings about the drug traffic, we found ourselves conferring with them again at meetings focused on the plane traffic—the roaring engines adversely affecting the quality of our sleep. In our case, we had to run constant white noise for sleep to be made possible.

The plane noise had an affect not only on my domestic life but on my work life. As a teaching artist and author—I work with a number of special populations including high school students, adult felons, kids in detention, seniors, teachers, parents, therapists, university students and actors—and in this work, much of my time is spent at home in deep and, since moving to Beacon Hill, frequently impeded concentration.

At one of the neighborhood meetings, I approached an airport representative to ask him where in the city one might set up residence that is free from plane noise. I was taken aback to hear myself ask such a thing. The mere thought, much less the prospect, of moving from a house we loved because of airplanes seemed shocking and absurd, but, I followed his advice to look into it. I received no absolute assurance that flight paths wouldn't change, but on behalf of my health and over-all state of being, I knew I had better attempt to discover some less-afflicted Seattle area.

So attempt we did after five years on Beacon Hill. Naturally, most people would tell you that living in the north end of Seattle was the only solution, but, we had become south end converts before we even found the Beacon Hill house. Part of that conversion began and was sustained because of our reverence of Seward Park. Almost every day, from early on as a resident of Beacon Hill, I ventured four miles to the park to walk the loop. Before long, I had met a fascinating array of other park-lovers out of which I acquired some fine and loyal walking pals. Although Seward Park was far from free of plane noise, even that and the levels of boat and jet ski noise couldn't keep me away. I had never experienced a park so full of people unafraid to reach out to one another and to cherish their surroundings.

I anguished over the prospect of leaving our home, but, I was tortured by that constant noise and, on more than a few occasions, overwhelming plane fumes. Still, I wasn't going to re-locate for the sole purpose of achieving some quiet and I couldn't imagine myself in a place that would put Seward Park out of daily reach. One day, in July, after a walk there with my husband, engaged in one of our many discussions about what we were going to do with our living situation, we were driving through the streets en route to Seward Park PCC thinking there's got to be a spot, some spot to move to, in that very area. My husband had figured out that a home east of 50<sup>th</sup> would definitely be less afflicted with plane noise and, if we could miraculously find one that we liked and could afford, it would keep us in the area we so ardently favored. Sure of the possibility and determined to unearth it, my husband turned the car up 54<sup>th</sup> and lo and behold, there was the spot—a piece of land within walking distance to the park and PCC. The next day, the listing agent informed us that the land was wrapped in negotiations, but, by the end of the week that deal fell through and we were amazed as the process unfolded to grant us the privilege of purchasing the land.

That marked the beginning of our arduous efforts to re-situate ourselves and sustain our place in the south end community. We gave up any hope for a summer vacation or even a week-end off and continued on with the re-location efforts—with the help of several friends, we painted and packed and put our house on the market. We managed to sell the house. The next task was finding a rental that we could tolerate and afford. That is another story in itself—one fraught with tremendous grief and anxiety—but

we managed to happen into a fitting situation—livable and affordable housing for the duration of our house-building project.

Once moved, in early October, we experienced nothing short of a sort of post-traumatic stress disorientation. Living in the north end, we re-discovered life without constant plane noise and began to question whether we would be willing to return to the south end at all. It was difficult not to super-impose the memories of noise assault on what we had thought was a better location. Over the course of several weeks, we returned to our Seward Park land to investigate whether the plane noise was really better there. At first, it was nearly impossible to experience any plane noise at all without re-living the five years of noise we had endured. Although our new temporary lodging in the north end was only a block from the freeway, it seemed a noise-liberated zone. And although we had closed on the land, we had deep fears about that Seward Park location returning us to the torture. The neighbor directly next to the land was sympathetic to our plight and although she tried to reassure us of the comparatively quiet attributes, we had to see for ourselves. After weeks of transition time which allowed us to partially recuperate from our plane noise-laden five years, we arranged a date to sit in her house and listen. Happily and with great relief, we were able to perceive the difference and resolved to go ahead with the project.

A couple months later, after several meetings with an architect, we ventured out to visit our land and take a Sunday walk in our beloved Seward Park. On our way there, delighting in the prospect of having a residence so near to it, we, by chance, encountered one of our new neighbors in her yard. She quickly exclaimed "I was just thinking of you last night when we were talking about the flight path change!" "What flight path change?!" we gasped in horror!

Please accept this letter as a deeply earnest plea for you to consider an alternative option to the split east turn. Though Seward Park is definitely hit with quite a bit of noise, it remains, for me, the crowning glory of Seattle. To assault it with an intolerable level of noise that the split east turn would produce, would be to destroy one of Seattle's primary places of natural beauty. That would not only deprive us of a place to be, but it would pain me to wonder whether that destruction might just be a symbol of more destruction to come in Seattle and our culture as a whole. For me, it would also mean destroying my direct bond with Seattle, because, frankly, if the split east turn is approved and implemented, Seward Park will be my last Seattle address.

Sincerely, *Pamela*

Pamela Sackett

P.O. Box 95126

Seattle, Washington 98145 / 206.985.7367

1-4-2000

TO WHOM IT MAY CONCERN,

I AM WRITING UPON NOTIFICATION  
THAT OUR NEIGHBORHOOD IS GOING TO BE  
EXPERIENCING MORE JET NOISE.

WE BOUGHT OUR PROPERTY TO SPECIFICALLY  
GET AWAY FROM THE JET NOISE WE HAD  
EXPERIENCED IN THE LESCHI AND BEALON HILL  
NEIGHBORHOODS.

I WORK AND RUN A BUSINESS IN THE  
SEWARD PARK AREA BY LAKE WASHINGTON  
AND MORE AIR TRAFFIC WILL AFFECT THE WILDLIFE.  
WHAT LITTLE WILD LIFE WE EXPERIENCE IN OUR  
AREA OF TOWN.

I REPRESENT A GREAT NUMBER OF  
RESIDENTS IN SKYWAY AND SOUTHERN



LAKE WASHINGTON WHO OPPOSE MORE  
JET NOISE.

PLEASE LISTEN TO US AND PROTECT  
OUR LACK OF NOISE POLLUTION.

THANK YOU FOR YOUR TIME,

*Judy McNeel*  
LAKE WASHINGTON LANDWORKS  
11401 CORNWELL AVE. S.  
SEATTLE, WA. 98178  
206-772-7948

# *Eldon D. Howard*

December 16, 1999

Mr. Bernard Dunkelberg  
c/o Mr. Michael J. West  
1122 East Pike  
Seattle, WA 98122

Dear Sir:

Fifty-eight years (plus one day) after the infamous sneak attack on Pearl Harbor, the Port of Seattle's Noise Abatement Office dropped a bomb on Mercer Island without warning.

That bomb is the citizen's advisory proposal "East Turn" flight track option over the center of Mercer Island. The impact of such a bomb would increase noise levels for an additional 18,000 people; 100+ aircraft making lower level, climbing, east turns will only exacerbate the overall noise level.

The "East Turn" option is a clumsy last minute proposal that unnecessarily makes adversaries out of neighbors. It is not about noise abatement, but rather the shifting of aircraft noise from existing communities to new communities. These are precisely the negative actions that the Port 150 Study guidelines require you to avoid. The "East Turn" option must be abandoned now!

The Port Noise Abatement Office would have earned their salaries if they had spent the last three years getting FAA acceptance of the "original" historic Duwamish corridor west turn.

Very truly yours,



Eldon D. Howard

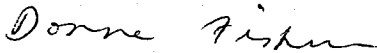
Dear Mr. West,

I recently attended the December 8<sup>th</sup> meeting on Mercer Island concerning the new flight path being proposed. I was very upset to learn that the path would bring over one hundred flights per day over a heavily populated area. To make matters worse, the planes would be turning at a much lower elevation than they are currently flying. The noise impact on our community would be horrendous.

For example, it would have a detrimental effect on the quality of our children's education. Students in school would have a difficult time hearing the teachers speak, every few minutes throughout the day. Mercer Island is already subjected to loud jet noise from the Boeing plant in Renton, in addition to freeway noise.

The split track flight path being proposed is a terrible plan and would have a devastating effect on our community. Please consider other options before giving consideration for this plan. Thank You.

Sincerely,



Donna Fishman  
8930 S.E. 45<sup>th</sup> St.  
Mercer Island, WA 98040

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To: mjwest@prodigy.net  
From: Susan Heckbert <heckbert@u.washington.edu>  
Subject: Comments on Flight Path  
CC:

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Dear Mr. West,

I have taken the time to become informed about the proposed Split E alternative. I attended the Open House at Tyee High Schol on Decem well as the meeting on Mercer Island at the High School on December

I would like to express my strong opposition to the proposed Split. The charge of the Citizen's Advisory Committee is to decrease the from air traffic noise, and not to shift noise from one community t Clearly, the proposed Split East turn alternative simply shifts no does not decrease the overall noise burden.

I would also like to express my strong advocacy for directing north flights along the Duwamish corridor.

The community of Mercer Island has not been adequately represented Citizen's Advisory Committee. The study done by the consulting tea take into account the already heavy traffic over Mercer Island from flights out of SeaTac, and flights from Boeing field, Renton field, Renton Boeing plant.

Thank you for taking my opinion into account.

Susan Heckbert  
Mercer Island resident

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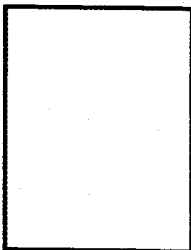
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To: mjwest@prodigy.net  
From: MRaunig@aol.com  
Subject: Sea-Tac FAR Part 150 Study  
CC:

- 
- 
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- 
- 

Comments re study:

1. ALL airport noise must be considered, i.e., Renton Airfield, Ki Airport, Boeing Co. flights, in addition to Sea-Tac
2. Can turns be split 5 miles NORTH of present path in lieu of Sou
3. Divert traffic to Paine Field -- passenger flights and/or cargo



Marjorie J. Raunig  
4214 S. Hudson  
Seattle, WA 98118  
Phone: 206-725-9657  
Fax: 206-725-5025

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To: mjwest@prodigy.net  
 From: "Derek, Annette, Grace and Brian" <dwhipple@u  
 Subject: Proposed flight path change  
 CC:

Dear Mr. West:

We are asking for your help in ensuring that a just and fair decision concerning the Port of Seattle's proposal for a "split east turn" for northward-departing jets out of Sea-Tac Airport.

This turn would send 125 jets per day on approximately 128 days over the Seward Park/South Seattle neighborhood at significantly lower altitudes than these jets currently fly. While we realize that every neighborhood needs to accept their fair share of airplane noise, several important factors were not considered in this proposal, including existing noise from Boeing Field, Renton Airport, and the adjacent facility in Renton, and the impact on Seward Park. In addition, the Study is misleading in the way in which affected populations are counted.

There is a perception that because this area tends to have low population density and more immigrants than anywhere else in the State, that special notice would be taken of this new and unjust proposed plan. As you and we are very concerned as are our neighbors.

Several alternatives exist such as greater usage of the Duwamish River corridor and noise mitigation strategies.

We are recommending that the "Split East Turn" flight path change be eliminated as a consideration and other alternatives be explored. We feel strongly that the proposed "split east turn" is not only a poor solution to a difficult problem, but would just lead to more problems. We are firmly committed to seeing that a just solution be found.

Thank you very much,

Annette Quayle and Derek Whipple  
 5328 47th Avenue South  
 Seattle, WA 98118  
 (206) 725-2740

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**To:** mjwest@prodigy.net  
**From:** NAN & JIM SCHULTZ <njschu@juno.com>  
**Subject:** Airplane Traffic  
**CC:**

I am having trouble understanding why so much discussion and proces necessary to reduce airplane noise over Madrona, the area of the ci which we live.

There are acknowledged clear alternatives to the take-off and land routes now being used. It is a simple matter of fairness to use many different routes as is feásible to reduce the burden on any on community. The residents of other parts of the metropolitan area including Mercer Island have no special privileges that make them i We all use air transportation.

Simply ask: WHAT IS FAIR? The solution is that simple.

James Schultz  
 1610 35th Avenue, Seattle  
 206/329-3309

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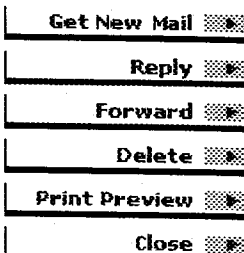
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 bedwards@martinnelsonco.com dunnwa08@mail.house.gov  
 horn\_ji@leg.wa.gov Ballaisia\_id@leg.wa.gov

From: Diane Medved <menorahnorth@juno.com>

Subject: Questions from Mercer Island residents Michae

CC:

I am writing on behalf of myself, my husband and our three children live on the southern end of Mercer Island. We are distressed to l of the proposed revision of the SeaTac take-off path that directs flights in a "split track" (or any track) over Mercer Island.

I attended a public meeting at Mercer Island High School in e December in which the Part 150 study was discussed. I learned that a change would likely direct more than one hundred additional flihg over the densely-populated island, at altitudes as low as 3,000 fee According to the study, the noise disruption is likely to make norm conversation impossible as the planes pass. Those in the audience told that this would cause disruptions every 5-10 minutes in classe Island Park, Lakeridge and Islander Middle Schools, and would conti into the evening.

I pose to you questions arising from the meeting for which I urgently request your response:

#### Environmental questions:

Clearly a high volume of large, filled commercial aircraft accelerating at low altitudes would negatively impact air quality. environmental impact study not required before consideration of thi can proceed? What levels of adverse impact are considered acceptab residents to suffer?

Adding more than one hundred low-flying aircraft over Mercer Island is likely to impact the nesting eagles and other wildlife th residents such as ourselves treasure. Will an environmental impact report detail the impact of pollutants on wildlife?

As a licensed psychologist, I'm attentive to the psychologic emotional impact of environmental irritants on marriages and famili Have there been studies detailing how adding noise and interruption this degree have impacted family life? Will this be part of the environmental impact respport that I assume must be prepared?

#### Questions about Overlapping Impact from Three Airports:

Our home is near Renton Airport and the Boeing Airfield. We many aircraft taking off overhead presently. In addition, we occasionally see large, low aircraft ascending and passing--I'm not their source--that rattle our windows and make conversation impossi Have there been, or will there be studies that assess the PRESENT a



of noise and pollution to which Mercer Island residents are already subject? How will such an assessment be analyzed and weighted when considering whether to add the proposed additional 100+ aircraft to overhead load?

Questions about property and education:

Clearly such an infliction of noise would decrease property value and destroy the sense of peace for which Island residents have paid dearly. What is the mechanism by which such a decrease becomes reflected in lower tax valuations? How would such lower valuations resulting decrease in education funds, impact the currently top-rated public schools for which residents such as ourselves paid premium prices in order to patronize?

Questions about the Decision Process

I understand from the public meeting that alternatives for take-off that do not cause such disruption exist, most notably use Duwamish corridor. Why wouldn't this option, as well as take-off to west over water, be implemented before considering more harmful and disruptive plans such as the split turn?


You can certainly understand why the entire Medved family is distressed over this proposal: How would YOU react to the prospect more than 100 low-flying aircraft disrupting your life every five to minutes every day? We would greatly appreciate your response to my questions, as well as your efforts to stop this non-productive flight-path change.

Sincerely,

Diane Medved, psychologist, Michael Medved, radio talk show host, Shayna and Danny Medved, students at Mercer Island schools.

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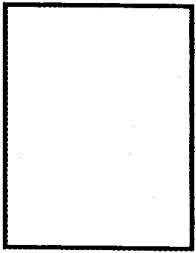
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**To:** seymour.r@portseattle.org MJWEST@prodigy.net  
**From:** "Ellie Gittelman" <ellieg@home.com>  
**Subject:** No Increased Jet Noise Over Mercer Island  
**CC:**

Dear sirs,

This is a follow up to an email I sent December 7th regarding my op to the split turn proposal for flights over Mercer Island. Since t letter I have had a chance to read copies of letters to you from ou city coucil members, and city manager. If, as they say, your prior reduce noise, not merely shift it, then it seems clear to me that t turn cannot be approved.



The data presented at the meeting at the MI High School showed no r in noise overall, and common sense indicates that planes turning ea lower will be louder. Thank you for this opportunity to add my com the public record.

Sincerely,

Ellie Gittelman  
 5353 Lansdowne Lane  
 Mercer Island, WA  
 (206) 230-9932

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Dear Senator Horn, Representatives Ballasiotes, Wensman, and Dunn a  
our Port of Seattle Designee: Mike West:

My family, community and I desperately need your help in finding a  
better solution to a greatly upsetting situation in our neighborhoo

Recently a committee comprised of individuals not representing our  
neighborhood of Mercer Island proposed to the Port of Seattle that  
SeaTac air traffic be diverted from its current flight path to fly  
lower elevation and over the middle of our neighborhood which, of  
course, would drastically increase the already present significant  
level from aircraft activity. As incredibly concerned citizens, we  
been encouraged to write you for some help in addressing this obvio  
distressing situation.

My family and I have lived here for almost three years. We moved f  
downtown Seattle partly for a quieter place to raise our children.  
was quieter at first. In the past year however, we have experienced  
significant increases in aircraft activity from the aircraft hangar  
well as flight noise. We now constantly hear engine roar beginning  
early morning (5 or 6am) into the evening hours. My 7 year old, Je  
'volunteered' at breakfast this morning that he 'hates living here'  
because of the never ending roar which initially frightened him at  
bedtime and now accompanies him throughout his school day and eveni  
These noise pollutants were not present to this extent even a year  
What has changed that this noise increase is so pronounced?

I understand that with the committee's new recommendations, our noi  
would not only increase, but intensify. It has been proposed that  
neighborhoods should 'share' the noise burden. I ask what hangar n  
or constant roar does Medina or other farther outlying neighborhood  
share?? Shifting noise from one neighborhood to another like a hot  
potato does not solve this problem. Can we not find a better solut  
by redirecting air traffic to less populated areas? How about  
correcting whatever is necessary at the hangars to help reduce the  
incessant roar which now nearly constantly blankets my neighborhood  
a fog? Something has changed in the past year that has made the no  
level drastically increase. Surely we can use our human abilities  
solve a quality of life issue such as this which affects such a  
multitude of people and generations!

My neighbors and I would greatly appreciate your immediate attentio  
this matter. We are all very concerned and our neighborhood is qui  
gathering to try and address this situate before it becomes out of  
and more difficult to remedy. Any information and assistance you c  
give regarding this matter would be immensely appreciated and not  
forgotten for generations and years to come.

Respectfully,

Barbara L. Knopes  
(and Jeff Knopes, who doesn't want to hear the roars anymore)  
8170 West Mercer Way  
Mercer Island, WA 98040

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**To:** mjwest@prodigy.net  
**From:** Diane Smedley <dsmedley@datasmartinc.com>  
**Subject:** Air Traffic Over Mercer Island  
**CC:** msmedley@worlnet.att.net

Dear Mr. West:

I am writing to express my opposition to the proposed increase in air traffic over Mercer Island. I believe that increased air traffi will negatively impact our children's learning environment and the quality of life here on Mercer Island by increasing noise.

We here on the Island work hard to provide our children with a good learning environment and create a good and wholesome community for all. I do not wish to see my own efforts toward those ends diminished for any reason.

Please send me any information you have on this proposal. I would like to become more informed about it.

--  
Thank you,

Diane Smedley  
7704 88th Place SE  
Mercer Island, WA 98040

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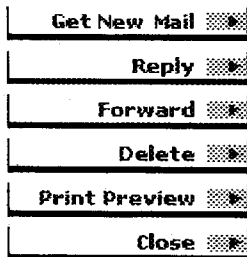


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To: mjwest@prodigy.net  
 From: ltrousd@collins.rockwell.com  
 Subject: Part 150 Study--Comments  
 CC: Sue\_ssv@msn.com Rconrad@ci.mercer-island.wa.us Lorelei23

Mr. West,

I am writing you because I understand that you are gathering public commentary on the work of the aircraft noise advisory committee, on behalf of Dunkelberg & Company.

For the record, with respect to future Sea-Tac flight tracks under conditions, my opinions as a Mercer Island resident are:

1. To be fair, the East Turn should carry at most half the traffic thereof;
2. To be objective, the fact that we are also heavily and directly to Boeing Field/KCIA noise (especially 4 am freighter flights with old noisier aircraft) should be factored in;
3. To be analytic, the fact that we are also directly exposed to Field noise (especially float planes, with long exposure durations) should be accounted for;
4. To be rational, the turns should be made even further north, achieving higher altitudes and reduced noise levels;
5. To take the larger view, it should be recognized that Mercer Island already has more than its fair share of total pollution, i.e. air plus noise impacts of I-90;
6. To be astute and economic, the idea of a 3rd runway should be in addition to the thinking of the expert panel that drove their 2-1 n four years ago, Boeing's current assessment is that a large number of new Transpacific routes is emerging to link Asian cities directly with and Midwest cities, overflying traditional West Coast intermediate Sea-Tac traffic will diminish the most, as it has the lowest percent

demand/the most distorted apparent total demand;

7. To be realistic, it needs to be recognized that wherever an af public has had its fill of airport noise, stringent noise curfews result.

Thank you for your attention.

Regards,

Lee R. Trousdale

[lrtrousd@collins.rockwell.com](mailto:lrtrousd@collins.rockwell.com)

206/232-7636 Home

425/814-1307 Office

P. S. Dr. Robert Rudolph, Medina, does not represent my interests.

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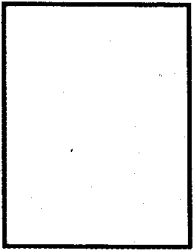
**To:** mjwest@prodigy.net  
**From:** B2DUVALL@aol.com  
**Subject:** FAR Part 150 Study  
**CC:**

We attended the December 8th meeting at the MI High School and want commend all of you for handling an impassioned audience in a calm a enlightening way.

We live on South Mercer Island and currently put up with landings a Renton Airport that seem to loudly skim our house on many occasions addition, beginning at 6:00 am on many mornings when the wind is ou South, we hear the jets rev for takeoff at Sea-Tac. It seems that proposal that increases noise levels significantly over southern Me Island is decidedly unfair to those of us putting up with airport n this time.

Thank you for the opportunity to comment.

Bill & Bobbie Duvall  
 7300 Island Crest Way  
 Mercer Island WA 98040



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**To:** mjwest@prodigy.net  
**From:** "elizabeth huber" <emhuber@hotmail.com>  
**Subject:** Jet Noise/SeaTac Part 150 Study  
**CC:**

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Dear Michael West:

I am writing to ask about the status of the Part 150 study currentl underway, and whether you have any information about recent changes flight paths. At the December 8 meeting at Mercer Island High Schoo name was given as a contact person.

We live on Mercer Island, mid-westside. We hear jets taking off al long, but most acutely at nighttime, when we are frequently awakened noise. We also often hear loud prop planes late at night and early morning.

We would like to know whether you have any information about recent in the flight path which could be causing the increase in the jet n which we hear. We are also concerned about one of the propals dis the December 8 meeting to allow jets to fly directly over Mercer Is I've mentioned, the current level of jet noise is a problem.

We would greatly appreciate any information you might have concerni issues.

Thank You.

Elizabeth Huber

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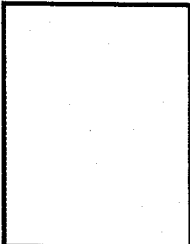
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**To:** rob.mckenna@metrokc.gov MJWEST@prodigy.net  
 seymour.r@portseattle.org  
**From:** Dale Klein <daleklein@home.com>  
**Subject:** flight paths  
**CC:**

To Whom it may Concern:

I am writing to object to the proposed flight path diversio present northbound corridor to include Mercer Island and south Bellevue. This new right-turn option would be considerably lower a therefore noisier and, in addition, would impact many thousands mor homes and schools. I object to the fact that impacted neighborhood represented by Dr. Rudolph whose admitted opinions are in direct opposition to those held by MI and south Bellevue citizens. Lastly urge you to consider the Duwamish solution which would fly over an industrial corridor and Elliot Bay.

Sincerely yours,  
 Dale Klein  
 5315 Butterworth Road  
 Mercer Island, WA 98040



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bedwards@martinnelsonco.com seymour.r@portseattle.org  
dunnwa08@mail.house.gov senator\_murray@murray.senate.gov

From: Dennis Adler <dennisad@MICROSOFT.com>

Subject: [No Subject]

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To Whom it May Concern:

I am a Mercer Island resident and homeowner who recently learned of of Seattle's proposal to send jets over Mercer Island. My initial, response has now turned to outrage.

I am upset that most Mercer Islanders only learned about this propo the eleventh hour. By now, after the Mercer Island residents' overw turn out and cry against the Port of Seattle's proposal to send jet Mercer Island, you have hopefully heard from many of us who are utt against anything like this being instituted. I am writing to you to name to that list.

I am appalled that the District 6 representative, Dr. Robert Rudolp has a vested interest in diverting planes from flying over Medina t Island, was appointed as our representative and was then negligent keeping our community informed. How could someone with such a clear conflict of interest be appointed to a position like this? I heard McKenna stated that no one else offered to participate in this proc Certainly not, when we were left in the dark until the last minute. Mercer Island residents been apprised of this situation before it e gained the momentum it has now, you would have had several voluntee

Obviously, there is a conflict of interest, as Dr. Rudolph has a ve interest in the Port's decision. He has been upset with the amount noise over his Medina home for years. I can understand that, but pr solution that will not appreciably decrease the noise he is sufferi and will adversely affect 447% more people if the proposal is accep unjust and unfair. Where is the wisdom in that line of thinking? Th proposed change in flight paths will only partially decrease the no Medina is now suffering from and will shift the problem from one co to another.

This is a poor way to solve such a thorny problem. It does not begi address the root causes of the noise (the abandonment of the Duwami Corridor). Medina should not have to suffer from the airplane noise now exposed to, but Mercer Islanders should not have to suffer in t stead. A change such as that being proposed will obviously hurt man

than it will help.

First and foremost, jet travel over Mercer Island will cause a dramatic change in the tranquility of Mercer Island. Ask any newcomer to Mercer Island - they likely chose to move here because of the wonderful quality of life. Most of us here have chosen to pay higher real estate prices and property taxes in exchange for award winning schools and the peaceful community environment that Mercer Island has to offer. We care for this community to raise our family for these very reasons.

I have lived under airport flight paths before. One of the factors in choosing to live on Mercer Island was the lack of such flight paths. Now, change this now, especially when other, viable alternatives exist, is unconscionable!

The flight path change will destroy what has been created here for generations and could result in big financial losses for many residents ultimately, from those who profit from the high taxes we pay. It has been well documented that jet noise leads to lower property values; such could easily lead to homeowner-initiated lawsuits. In some cases, property values have dropped 50 percent when new flight paths were created in communities that were peaceful prior to the change. How fair is this to impose on Island residents who have paid higher real estate prices to live in a tranquil, small community? Is it fair that Islanders will take large losses on the sale of their homes, should they have to move?

Those living in communities under the current flight paths purchase homes knowing what they were getting into. Real estate prices in these areas reflect the issue of jet noise. If residents in those areas are concerned, they should have more closely researched their community prior to purchasing their home.

While Councilman McKenna has tried to remedy this with new committee appointments from Bellevue and Issaquah, it is too late for these two voices out of twenty to have any real impact before January 19th when the recommendation will be submitted by the CAC. Despite the Consultant's reassurance that this is not the only voice listened to, we find it disingenuous to call this Citizen's committee when it is really a special interest group.

The lack of any proposals to go west or north shows the lack of consideration of all possible options. The Duwamish Corridor could handle the current east turn noise without shifting it to, and severely impact other residential communities.

I feel the Port of Seattle Commission, the Consultants, Bernard Dun Co., and the Citizen's Advisory Committee have all failed to honor their guiding policies to improve the overall noise environment and not shift noise from one residential community to another. The split east turn proposal violates both of these policies and should not be an option considered under any circumstances.

Also by violating their own guiding policies, they have deceived the communities affected by the split east turn without providing them warning or representation on the Citizen's Advisory Committee. While it may not have been intentional the results are inherently unfair and without representation of the entire community.

The 1987 study of scatter type flight plans such as the 'Split East' showed this to be a flawed policy impacting far more people than other plans.

The Consultant's Part 150 noise impact data clearly discredits the

Turn plan showing significant increases in the number of residents and an increase in overall community airplane noise.

With Puget Sound so close by, why is it that jets cannot fly over 1 populated areas? Would that not clearly be a win-win solution for a residents?

I respectfully suggest that the Port of Seattle demand of the FAA t north-departure flights be turned west, over the Duwamish flight ab corridor. In addition, it is time to seriously consider a return to departure rule that existed prior to the 1979 oil crisis: that depa flights be required to reach an altitude of 8,000 feet before turni would require an adjustment to flight patterns for incoming flights change would be worth it for hundreds of thousands of residents.

While this may use a little more fuel, it will significantly improv quality of life for all residents. Any increases in airline ticket would at least spread the pain amongst all people who use the airpo instead of penalizing those of us who live under the newly proposed paths. Letting corporate convenience and greed dictate the outcome quality-of-life decisions for your voters is not the way things are to work in our society.

Finally, it is worth pointing out the inherent conflicts of interes current decision-making chain:

- \* The CAC was selected by the Consultants.
- \* The Consultants were hired by the Port Commission.
- \* The Port Commission relies on its clients, the airlines for income.
- \* The airlines save money on fuel with the east turn & especi split turn at the expense of the citizens' quality of life.

I urge you to oppose this program and to do whatever is in your pow prevent the split turn proposal from taking effect.

I urge the committee of this study to consider these points and to the decision date. There is obviously much more that has to be cons than has already been taken into account.

I sincerely hope that the Port of Seattle commissioners and staff a definitively opposed to the split turn proposal as we are.

Sincerely,

Dennis Adler  
7655 SE 72nd Place  
Mercer Island, WA 98040

[dennisad@microsoft.com](mailto:dennisad@microsoft.com) <<mailto:dennisad@microsoft.com>>;







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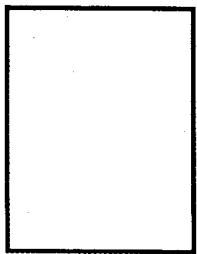
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**To:** MJWEST@prodigy.net  
**From:** "Yates, Jessica R " <YATJ235@LNI.WA.GOV>  
**Subject:** Jet Noise Question  
**CC:**

Hello, I live in Seward Park, & we currently get a lot of noise whe weather is bad & the flight path is changed. Is the proposed east going to sound a lot like it now does in bad weather all the time? have any updated info on the status of the proposed change that you forward to me?

Thanks, and Happy New Year.



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**To:** mjwest@prodigy.net  
**From:** "Susie Anshell" <sanschell@hotmail.com>  
**Subject:** aircraft noise  
**CC:**

Hi--I've been meaning to get this off to you ever since the big mee MI High School. I live in the 34 hundred block of 74th Ave. on the I walk a good deal, ranging roughly from the MI library to the I-90 want you to know that my observations suggest the status quo descri the materials distributed at the meeting is a myth. When the wind the north (i.e., most of August through October), the jets turn eas south of the water, generally somewhat south of I-90, but ranging a south as about 36th street. After the meeting, my first opportunit the north take-off pattern occured about 2 weeks ago when I was cle windfall from my roof. I happened to be up there from about 11:30 t and, this time, saw a steady procession of jets paralleling I-90 o south. Several flew over the greenbelt west of Mercerdale just beh house. I strongly urge a return to the pre-fuel-crisis flight path that is truly impossible for traffic reasons, then go for the FMS concentration of the path over the water. By the way, the 3200 thr portion of 74th Ave. also seems to be favored flight path of non-je helicopters, so in the summer it is impossible to get the gist of r programming if you're out in the yard. Let me know if I can do so to help your cause. Susie Anshell

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 bedwards@martinnelsonco.com seymour.r@portseattle.org  
 dunnwa08@mail.house.gov senator\_murray@murray.senate.gov

**From:** "Peggy Hayes" <mhayes2@uswest.net>

**Subject:** Proposal to Modify North Flow, East Turning F

**CC:** diana@larusstone.org KVGusdorf@aol.com sarapage@earthlink  
 mhayes2@uswest.net

To whom it may concern:

We are Mercer Island residents and homeowners who recently learned Port of Seattle's proposal to send jets over Mercer Island. Our fi response was total shock, and has now turned to bitter outrage.

First of all, we are upset that most Mercer Islanders only learned this proposal at the eleventh hour. By now, after the Mercer Islan residents' overwhelming turn out and cry against the Port of Seattl proposal to send jets over Mercer Island, you have hopefully heard of us who are violently against anything like this being instituted writing to you to add our names to that list.

We are appalled that our District 6 representative, Dr. Robert Rudo has a vested interest in diverting planes from flying over Medina t Island, was appointed as our representative and was then negligent keeping our community informed. How could such a biased person be a to a position like this? We heard Mr. McKenna say that no one else to participate in this process, but we are certain that if Mercer I residents had been apprised of this situation before it ever gained momentum it has now, you would have had more volunteers than you wo known what to do with.

Obviously, there is a conflict of interest, as Dr. Rudolph has a ve interest in the Port's decision. He has been upset with the amount noise over his Medina home for years. I can understand that, but p a solution that will not appreciably decrease the noise he is suffe and will adversely affect 447% more people if the proposal is accep absolutely ludicrous. Where is the wisdom in that line of thinking proposed change in flight paths will only partially decrease the no Medina is now suffering from and will shift the problem from one co to another. Is this a solution? Please! It does not begin to add problem itself. Medina should not have to suffer from the airplane they are now exposed to, but Mercer Islanders should not have to su their stead. A change such as that being proposed will obviously h more than it will partially and minimally help.



First, and most obvious, jet travel over Mercer Island will cause a change in the tranquility of Mercer Island. Ask any newcomer to Me Island - they likely chose to move here because of the wonderful quality of life. Most of us here have chosen to pay higher real estate prices and property taxes in exchange for award winning schools and the peaceful community environment that Mercer Island has to offer. We care about this community and want to raise our family here for these very reasons. \

The flight path change will destroy what has been created here for generations and could result in big financial losses for many residents ultimately, from those who profit from the high taxes we pay. It is well documented that jet noise leads to lower property values. In some cases, property values have dropped 50 percent when new flight paths were created over communities that were peaceful prior to the change. How is it fair to impose on Island residents who have paid higher real estate prices/taxes to live in a tranquil, small community? Is it fair that Islanders will likely take large losses on the sale of their homes, they have to move?

Those living in communities under the current flight paths purchase homes knowing what they were getting into. Real estate prices in these areas reflect the issue of jet noise. If residents in those areas are complaining, they should have more closely researched their community before purchasing their home.

While Councilman McKenna has tried to remedy this with new committee appointments from Bellevue and Issaquah, it is too late for these two new voices out there to have any real impact before January 19th when a recommendation submitted by the CAC. Despite the Consultant's reassurance that this is not the only voice listened to, we find it disingenuous to call this Citizen's committee when it is really a special interest group.

The lack of any proposals to go west or north shows the lack of consideration of all possible options. The Duwamish Corridor could handle the current east turn noise without shifting it to, and severely impacting, other residential communities.

We feel the Port of Seattle Commission, the Consultants, Bernard Du & Co., & the Citizen's Advisory Committee have all failed to honor their guiding policies to improve the overall noise environment and not shift noise from one residential community to another. The split east turn proposal violates both of these policies and should not be an option considered under any circumstances.

Also by violating their own guiding policies, they have deceived the communities affected by the split east turn without providing them with warning or representation on the Citizen's Advisory Committee. While it may not have been intentional the results are inherently unfair and without representation of the entire community.

The 1987 study of scatter type flight plans such as the 'Split East' showed this to be a flawed policy impacting far more people than other plans.

The Consultant's Part 150 noise impact data clearly discredits the Split East Turn plan showing significant increases in the number of residents and an increase in overall community airplane noise.

With Puget Sound so close by, why is it that jets cannot fly over less populated areas? Would that not clearly be a win-win solution for all residents?

Our vote is that the Port of Seattle demand of the FAA that more north-departure flights be turned west, over the Duwamish flight ab corridor. In addition, it is time to seriously consider a return to departure rule that existed prior to the 1979 oil crisis: that depa flights be required to reach an altitude of 8,000 feet before turni would require an adjustment to flight patterns for incoming flights change would be worth it for hundreds of thousands of residents.

While this may use a little more fuel, it will significantly improv quality of life for all residents. We would be glad to pay a few m dollars for plane tickets in exchange for being able to live free o pollution.

Our final major concern underlies all of the above:

The CAC was selected by the Consu  
The Consultants were hired by the  
Commission,  
The Port Commission relies on its  
the airlines for its income.  
The airlines save money on fuel  
east turn & especially the split turn at the  
the citizens' quality of li

We urge you to oppose this program and to do whatever is in your po prevent the split turn proposal from taking effect.

We urge the committee of this study to consider these points and to the decision date. There is obviously much more that has to be cons than has already been taken into account.

We sincerely hope that the Port of Seattle commissioners and staff definitively opposed to the split turn proposal as we are.

Sincerely,

Mark and Peggy Hayes

8395 SE 53rd Place

Mercer Island, WA. 98040

(206) 236-0129

[mhayes2@uswest.net](mailto:mhayes2@uswest.net)

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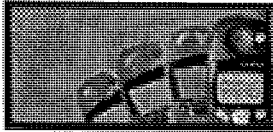
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Dear Mr. West,

I am a Mercer Island resident, located on the north end, very n current flight path when the wind is from the north. We can certain when the planes are taking off in this direction and flying overhea the altitude they currently fly and with today's newer engines, the negligible. The local propeller airplane traffic to or from Boeing more noticeable than the commercial jets.

I must also say that I am a helicopter pilot and flight instruc

most of the time out of Boeing Field. Aircraft noise is a constant face in our business and altitude is the most effective way to redu impact of noise, no matter what kind of aircraft is involved. To di commercial jet traffic in its highest power output configuration, o

when it is heaviest, over the middle of Mercer Island at lower alti

currently over the north end and Medina, would be of great negative

everyone involved. Keeping altitude as a major factor in mind, I su extending the upwind portion of the flight path beyond Medina, Lesh north Mercer Island would lessen the noise impact on all involved. support the use of the Duwamish Corridor which would affect the lea populated area of all.

Very truly yours,  
Steve Demmert  
2255 66th Ave. S.E.  
Mercer Island, Wa 98040

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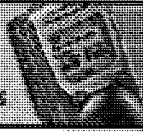
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**To:** mjwest@prodigy.net  
**From:** BLSternoff@aol.com  
**Subject:** Proposed Flight Pattern Changes  
**CC:**

**Date:** December 16, 1999

**To:** Barnard Dunkelberg & Company  
c/o Michael J West  
1122 East Pike Street  
Seattle, WA 98122

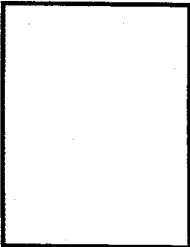
**Re:** Proposed Flight Pattern Changes  
Part 150 Study Committee Port of Seattle

I am writing this letter to register my opposition to changes in the flight pattern originating out of SeaTac International Airport. I am particularly opposed to the change in the flight pattern which shortens the north turn and brings flights across and over Mercer Island. My concern is noise and safety.

Sincerely,

Burton L Sternoff  
3864 West Mercer Way  
Mercer Island, WA 98040

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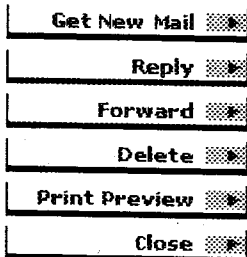
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To: mjwest@prodigy.net  
 From: "Jahns, Thomas R" <thomas.r.jahns@boeing.com>  
 Subject: comments 12/2 Public Open House  
 CC: duanea@wa.freei.net Helen.Chatalas@METROKC.GOV

Mike,  
 It was a pleasure to meet you at the Sea-Tac Airport Part 150 Study Open House at Tye HS on Thursday evening December 2, 1999. You ask provide a reminder I am on the Board of Boulevard Park Community Co located in District # 5, which is respectfully represented on Part by Duane Anderson. Boulevard Park is in Unincorporated King County Highline.

At the Public Open House, Paul D. and I had lengthy conversation re 1 below. Which is that there are homes situated exactly on the insu boundary that are just as impacted by jet noise and engine runups a newly insulated homes across the street. Within our conversation, P understood the issue and was very interested to investigate this fu recommended that I document the requests and provide them to you. A your direction that evening, I am sending the requests to you via e

1) Please investigate and re-evaluate the accuracy and locatio contour line, that was used to set boundary's for the Federally fun insulation program. Specifically in the Boulevard Park area along M Road from 128th Avenue South upto approximately 122nd Avenue South. of this investigation is to re-evaluate and expand the boundary to few uninsulated homes that are directly on the boundary along the e of Military Road. Here there are approximately 23 uninsulated homes on this boundary that are still greatly impacted by jet noise and a topographically on same level as the insulated homes across the str Looking along the entire 65 dnl contour line it appears there are n home insulations that have commendably ocured outside of the home boundary. Except in this small area of Boulevard Park where home in stop exactly right on the boundary.

2) To accurately reflect actual noise levels, can a noise moni located in the vicinity of #1 outside of the home insulation bounda

3) For homes that are impacted greatly by jet noise and engine are ultimately not insulated, can the port provide an opportunity f impacted residents to obtain low or no interest loans to insulate t ?

Appreciate your efforts to put these requests forward. Thanx.

Thomas R. Jahns  
Materiel-Program Management Office  
hours: 6:30am - 3pm.  
phone: 425-234-1664, pager: 206-416-2492, fax: 425-237-5118, m/c: 9  
email: [Thomas.Jahns@PSS.Boeing.com](mailto:Thomas.Jahns@PSS.Boeing.com)

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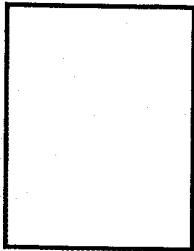
To: MJWEST@prodigy.net  
From: Alishoni@aol.com  
Subject: Jet noise  
CC:

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We urge the Port of Seattle to do everything it can to impact the number of King County residents with the jet noise from planes taking the north from Sea-Tac. This must involve consideration of population density as well as height of the planes.

The best solution would seem to bring them north over Puget Sound.

Levin and Janet Lynch  
8420 Benotho Place  
Mercer Island, WA 98040



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**Ryk Dunkelberg**

**From:** Michael J. West [MJWEST@pr-seattle.com]  
**Sent:** Tuesday, August 03, 1999 1:40 PM  
**To:** Ron Seymour (E-mail); Ryk Dunkelberg (E-mail); Claire Barrett (E-mail)  
**Subject:** FW: FAR part 150 Noise Exposure

Consider yourselves forwarded!

—Original Message—

**From:** Michael J. West  
**Sent:** Tuesday, August 03, 1999 11:38 AM  
**To:** 'Scott LaMontagne'  
**Subject:** RE: FAR part 150 Noise Exposure

Mr. LaMontagne:

Thanks very much for your comments. I'm forwarding them to the Port and to the other consultants on the Part 150 study. We'll make sure they're included in the study report; meanwhile, the issue of flight tracks is quite high on the list of discussion items for the Citizens' Advisory Committee, the Technical Advisory Committee, the Port and the FAA. Stay tuned. Thanks again for your message.

Michael J. West  
Pacific Rim Resources  
1109 First Ave, Suite 300  
Seattle, WA 98101  
206.623.0232 x200  
206.623.0781 fax  
[www.pacific-rim-resources.com](http://www.pacific-rim-resources.com)

—Original Message—

**From:** Scott LaMontagne [SMTP:scottlamontagne@hotmail.com]  
**Sent:** Friday, July 23, 1999 3:09 PM  
**To:** [miwest@pr-seattle.com](mailto:miwest@pr-seattle.com)  
**Subject:** FAR part 150 Noise Exposure

Mr West:

As a resident of the busy 18<sup>th</sup> Avenue corridor (the line up for SeaTac runways), I want to express my considerable dissatisfaction that the city/port is ACTUALLY entertaining the idea of abandoning its scatter design for landings and takeoffs at our ONE major airport. The scatter arrangement is the only thing that has allowed me to keep my sanity: knowing that the roar of jets just above my head is concentrated only in small blocks of time throughout the day. I wake up EVERY morning with the first Alaska 5:30 a.m. arrival and let me tell you THAT plane flies low ! If the city/port were to channel these flights even more over an already-neglected area of the city,



I feel that all redevelopment progress in the Central Area and Beacon Hill  
will be lost—to the detriment of the city as a whole.

Please don't abandon the scatter design..... rather change it to scatter  
with approaches from the WEST (not east as it currently is). Send those  
planes over the un- or under-populated areas over the Sound, not over  
neighborhoods in the city.

Thanks.

Scott LaMontagne  
1647 S. Weller St.  
Seattle, WA 98144

---

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December 6, 1999

To: Michael West  
1122 E. Pike Street - No. 1286  
Seattle, WA 98122

cc: Mr. Richard Kennedy  
1017 South 251st Street  
Des Moines, WA 98198

Mr. Robert Scheckler  
President - ACC

Mr. Jim Bartlemay  
CASE

From: Stan Scarvie  
204 South 206th Street  
Des Moines, WA 98198

Subject: Comments on Part 150 Open House - December 2 1999

After dealing with the Port of Seattle and the FAA for over a decade, I should not be surprised by anything that they or their consultants dream up. But I have to admit that I was absolutely floored by the presentations made at the December 2nd Open House. It is unbelievable that anyone can seriously consider these options.

However, I have also learned that the Port does not suggest anything in a vacuum. The Port always has an agenda that is seldom revealed to the public until the very last minute. The trick is for the public to try to decipher the clues to see if they can figure out what the Port is planning. This is the Port of Seattle's idea of open government.

I was also extremely disappointed by a remark made by a woman representing the Port at the Open House. She indicated that the representatives from Burien, Normandy Park, and Des Moines had not been very "vociferous" in their reaction to these plans. Because I was shocked at this, I specifically asked if they were aware of the exact options that were presented. She indicated that these plans had been previewed by them. I was speechless.

I unequivocally oppose any deviation from the established procedures. The Port and FAA are unable to abide by the current procedures, giving them any license to change will be giving them a free hand to do anything they want. I will put my comments under three general headings:

- The Port's Motivation for Requesting this Change
- Recommendations of What Must be Done Before Implementation
- General Comment

RECEIVED  
DEC 27 1999  
Barnard Dunkelberg

### **The Port's Motivation for Requesting This Change**

The rationale that the Port gives the public for anything they do is rarely, if ever, their true motivation. In this case, the Port is attempting to convince everyone that they are altruistically responding to citizens' requests for alternate departure routes to spread the misery caused by the noise of an airport in an urban environment. Given the Port's unblemished record of indifference to the health and welfare of the people of South King County, this rationale is completely impossible to swallow.

In my opinion, the Port's motives are more likely to be one or more of the following:

- A cynical attempt to divide and conquer the South King County residents in hopes of diminishing opposition to the Third Runway. If the Port is successful in getting the citizens of south Des Moines fighting with the citizens of north Des Moines over this proposal, it is possible that the City of Des Moines may be forced to withdraw from the Airport Cities Coalition (ACC). If Des Moines, as the most heavily impacted of all the cities involved is forced to withdraw, ACC will be seriously impaired and the court challenges to the Third Runway may have to be dropped.

Does this sound like an attempt to use politics to affect the course of judicial proceedings? Or, isn't "divide and conquer" a military tactic? So I guess the only question to decide is whether the Port of Seattle is attempting to make a mockery of the "separation of powers" or are declaring war on the citizens of Des Moines and Normandy Park. Either option seems unethical and does violence to the principles on which this country was founded.

- The Port intends to violate their Third Runway Environmental Impact Statement (EIS) by making the Third Runway into a fully operational runway instead of the dependent runway as described in the EIS. The routes shown on the *South Flow Three Tracks* option will in reality become the departure routes for the proposed Three Runway operations at Sea-Tac. (I am convinced that this was the Port's plan at the time that they wrote the EIS. I believe that the Port has intentionally deceived the public as to their true plans. So, what's new?)

The Port is planning to make this fundamental change in the scope of operations for this runway without reopening or amending the EIS. If these departure routes are in place prior to the construction of the Third Runway, the Port will simply issue a Determination of Non-Significance (DNS) when their conversion of the Third Runway into a fully operational runway is made.

The Port is again subverting the spirit, and probably the letter, of the environmental protection process. While this process is considered a nuisance by the Port, the FAA, and their consultants, it is the process that the people of Washington have established and must be followed. But abiding by "due process of law" has never been very high on their agendas.

For a change this dramatic in the aircraft operations of Sea-Tac, the Port must go through the full EIS process with all costs and impacts fully researched, confirmed by independent experts, and documented. The public must have time to review and comment on the EIS. After all, the health, safety, welfare, and property values of thousands of citizens are going to be adversely impacted if this plan is implemented. In addition, the financial base for the Highline School District will be further devastated by an action of the Port of Seattle. (Several generations of Highline students have already been irreparably injured by the actions of the Port of Seattle.)

Before implementing a change that creates this significant a change in the lives of thousands of citizens, a single Open House in March followed single Public Hearing in April of 2000 is totally inadequate.

- To punish the citizens of the areas which have been actively opposing the construction of the Third Runway. While verbal representations were made at the Open House that all efforts were made to place new routes over sparsely populated or industrial areas, it is interesting to note that the *South Flow Three Tracks* option calls for aircraft to make an immediate left turn at 1,000 feet MSL (600 feet AGL) and to fly at very low altitudes with full takeoff power over established residential neighborhoods in the cities of Des Moines and Normandy Park. (These cities are both ACC members involved in lawsuits against the Port.) This same track proceeds over Maury Island, increasing their sound exposure by 124%. (Maury Island residents are resisting the removal of 10% of their island for use in the construction of the Third Runway.) Coincidence? I think not, rather just a bit of petty spite by the Port.

*Note:* There is no corresponding westward turn on the northbound alternatives. Apparently the number of westbound aircraft is less on days that Sea-Tac is conducting northbound operations. That is indeed curious. Since the City of Seattle is supporting the Third Runway, it would not be good politics to alienate the citizens. The Port will put that westbound turn if the Third Runway finally becomes a reality and citizen support in Seattle is no longer needed.

- To reward the businesses and developers in the areas that have not opposed, or have actually supported, the construction of the Third Runway. The areas which would receive the most benefit of reduced noise are the cities of Federal Way and Tacoma. (Incidentally, I believe that the requests for spreading the noise out, if indeed there were any, probably came from businesses in these areas.) These cities have taken a neutral or pro-runway stance, as long as the noise of this runway does not have any impact on them. Coincidence? I think not, rather just a little *Thank You* from the Port of Seattle.
- Could this be a desperate attempt by the Airlines, the FAA, and the Port to reduce departure delays at Sea-Tac created by very poor scheduling by the airlines? Spreading out aircraft immediately after takeoff might make it possible for the

ARTCC to absorb them into the FAA Route Structure more quickly. This would allow the time between departures to be significantly reduced.

The Port is taking their usual stance. The health and welfare of the citizens is of absolutely no concern when the profits of the airlines may be involved. The Port operates to the detriment of the people. (The Port's motto should be, "Profits before People." Remember, these are the people that brought the WTO to Seattle, and even after witnessing the dire results, Pat Davis said she would do it again.)

The Port must require the airlines to assume the responsibility to correct the problems that the airlines have created for themselves. Do not make the people pay again for the total incompetence of airline management and the failure of the FAA to modernize the Air Route Traffic System.

### **Recommendations of What Needs to be Done Before Implementation**

I believe that the following items need to be completed before implementation of the *South Flow Two Tracks* or *South Track Three Tracks* can occur:

- The Port and the FAA must reopen the Sea-Tac Comprehensive Plan and revise the Third Runway EIS to include these changes. There must be new set Public Hearings and analysis of the entire project to determine if it is environmentally sound and economically wise. All the citizens of King County must have an opportunity to review the wisdom of the recommendations and costs involved. It may be determined that a MSA would be the preferred alternative to the Third Runway.

The people have a right to know all the facts. After all, it is their airport and their money. Also, the Port of Seattle is their government and is acting in their name.

- It is totally unreasonable, by any decent person's standards, to expect that a child can receive an adequate education in a school with departing aircraft passing a few hundred feet overhead. The Port of Seattle must pay the Highline School District the costs for closing Olympic and North Hill Elementary Schools. The Port must also pay 100% of the costs for the purchase of land and construction of a new elementary school(s) built to meet or exceed all current standards to replace these schools. (Mar Vista may have to be replaced also.) This must be done before the first airplane flies the proposed routes. To do less is completely unacceptable.
- Since property values in the newly affected areas will definitely decrease, it is reasonable to extrapolate that the Highline School District will lose even more of its funding base. The Port of Seattle must pay the Highline School District an annual payment to compensate this loss of revenue. It would be morally wrong for the Port of Seattle to harm the education of the innocent children just because they revised operations for the financial benefit of the airlines.

- The flight paths must be more defined. Since the current plan calls for the west branch of the *South Flow Three Tracks* option calls for an immediate right turn upon reaching 1,000 feet MSL (600 feet AGL), the actual point of turn is impossible to define. The turn point would be determined by aircraft weight, aircraft performance capabilities, air temperature, humidity, wind speed, wind direction, and pilot technique. In addition, an intersection takeoff, which is an entirely unsafe procedure but done all the time at Sea-Tac, would have an impact on the final ground track.

If a geographic turn point (identified by a specified DME) is not determined, the result will be chaos. Airplanes will be able to go anywhere they want. As a result, the Port must enlarge the mitigation area to include the maximum possible area of flight tracks that could be conceivably be used by departing aircraft. This would significantly increase the mitigation costs.

- The Port must complete all mitigation for the noise in the newly affected areas before the first airplane uses either of the new departure routes. A commitment from the Port is insufficient. Anyone who has ever dealt with the Port of Seattle knows that a commitment made by the Port is completely meaningless.

The Expert Noise Panel appointed by the Secretary of Transportation ruled that the Port had failed in mitigating the noise generated by the second runway. To date, about a quarter of a century after the construction of this runway, the mitigation is not yet completed. This is the mitigation required for the existing departure routes. These independent experts determined that the commitments of the Port of Seattle could not be taken at face value.

I have paid my taxes for 40+ years. I served with U.S. Forces in Vietnam. I did not do these things in order to be shafted by the Port of Seattle. I am unwilling to wait 25 years for the Port of Seattle to mitigate the impacts on my life created by the *South Flow Three Track* option. This is what happened to the people who believed the Port would honor the commitment to mitigate the noise from the second runway in a reasonable time frame. I would be 80 years old, and I will not accept living 30% of my life in a world of increased noise because of the arbitrary actions of the Port.

Either the Port can afford to mitigate the impacts of this proposal before initiating the proposed routes or they can't. If they can't, they should immediately drop these plans.

- The Port of Seattle must provide the residents who live southwest of the airport the same amount of clear area that the Port provides to the residents south of the airport. This area extends from the end of the runway to South 216th street. This space is critical to provide a clear area which would hopefully contain an aircraft crash on takeoff or parts falling from an aircraft occurring immediately after takeoff.

This buyout must be accomplished prior to initiation of these new routes. It would be totally irresponsible to subject the residents of the area to the possibility of being

injured or killed while the Port tries to arrange financing. If the Port does initiate this proposal without completing the buy out, the Port must agree to assume absolute liability for any injuries or deaths to residents caused by falling aircraft parts or an aircraft crash.

The Port should agree in advance to pay all medical expenses for injuries. The Port must agree to immediately pay as compensation a sum of \$10,000,000 to the estate of any person who dies as a result of an airplane crash or falling aircraft parts, without requiring any litigation, without regard to the age or physical condition of the victim prior to the incident. This must include deaths resulting from heart attacks or strokes that are suffered by residents who are in the area of the incident.

The procedures for the buy out have to be negotiated with the cities of Des Moines and Normandy Park rather than with individual property owners. The procedures used by the Port for the west side buyout were completely unfair and unsatisfactory.

*Note:* Since the turn point is undefined, as noted before, the Port must buy out a considerable amount of land to cover the entire area. At a minimum, if we consider the departure end of runway 16R as the turn point, the buyout area would be virtually all of the North Hill of Des Moines and a portion of Normandy Park. This would very expensive and the voters have a right to be advised of the true costs.

#### **General Comment**

A few years ago, I was at one of a Port FAR 150 Open House at Tyee High School. I specifically asked the Port representative what the sound exposure was at my home. He looked at his map and pointed out to me that my home was in the 55DNL or less area.

Since that time I have heard the Port of Seattle Public Relations repeatedly stating in the media that the noise in the vicinity of the airport was being reduced. This was surprising to me since my perception was that the noise was increasing.

Now, I have the handout from this meeting. It shows that Site 1 actually has an Annual DNL of 60.5 with a Southbound DNL of 62.0. From the very sketchy map included, I believe that Site 1 is actually west of my home. I was right, the noise from Sea-Tac operations is increasing.

It appears that the Public Relations Department of the Port of Seattle has been consciously deceiving the public. I believe the Port must conduct an internal investigation and the people responsible should be disciplined. If the Port has any interest in accuracy and keeping the people informed, the Port would also issue an Urgent Press Release to all the media advising them of the erroneous information previously released.

The Port of Seattle has shown a consistent pattern of being untrustworthy. Please do not believe them on anything. Thank you for considering my comments.

*Stan Scavie*

Sea-Tac International Airport Part 150 Study  
Public Open House  
Dec. 2<sup>nd</sup>, 1999

Comments

Thank you for taking the time to comment on what you have seen and heard at tonight's open house. You may submit your comments now in one of the boxes marked "Comments", or you can mail them to:

Michael West  
1122 E. Pike St. #1286  
Seattle WA 98122

At any time.

You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net).

Comments:

Bring Chart showing  
Sound level comparison  
Blender, Lawn mower  
to Mercer Island

Optional:

Name:  
Address (City, State, Zip):  
Phone:  
Fax:  
E-mail:



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Public Open House  
Dec. 2<sup>nd</sup>, 1999

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Comments:

The present noise level interferes with our speech + hearing when on the phone. I always have to ask people to wait while the plane passes over our home.

During the night we are awakened about 3:30AM + 5AM while a large plane passes over.

Insulating our home would help.

Optional:

Name: *Joan M. Moore*  
Address (City, State, Zip): *24812 12<sup>th</sup> Ave So. Des Moines WA*  
Phone: *206-878-8078* *98198*  
Fax:  
E-mail:

Sea-Tac International Airport Part 150 Study  
Public Open House  
Dec. 2<sup>nd</sup>, 1999

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Comments:

*...we live in Westinghouse Park 10<sup>th</sup> floor. 10' away from  
insulation program. Please consider us with the noise!  
Pollution is terrible. Please refer to the  
1978 Noise Contour Map.*

*We have lost the insulation between our windows & we  
have replaced our living room window panes. All of us  
have had to replace our roofs! The noise from a small  
jet is pretty bad. We can not talk. Would welcome anyone  
& come out side & see if they can hold a conversation.  
since we can not control the airport & airplane give  
us some relief in this life time. We have no faith  
in the Port authority. My husband has had cancer, lot of  
health problems.*

Optional:

Name: *Cobb, Maura & Peggy*  
Address (City, State, Zip): *24230 12<sup>th</sup> Ave. So. Des Moines WA 98198*  
Phone: *206-824-0618*  
Fax:  
E-mail:

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Comments:

I would like the 1998 contours be used to determine which houses be added to the list of houses eligible for sound insulation. The noise level easily exceeds the level at which conversation can take place. It is too loud!

Thank you for your attention

Charles V. Staab

Optional:

Name: Charles Staab  
Address (City, State, Zip): 27723 21st Plana So,  
Phone: Federal Way WA 98003  
Fax: 253 / 529-3623  
E-mail:

Sea-Tac International Airport Part 150 Study  
Public Open House  
Dec. 2<sup>nd</sup>, 1999

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Seattle WA 98122

At any time.

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Comments:

Please consider/recommend furthering the proposal to fill in insulation/insulation packages to fit with existing 1998 Noise contours. This would change my family's life.

Optional:

Name:  
Address (City, State, Zip):  
Phone:  
Fax:  
E-mail:

Barbara Hoob  
27723 21st Pl. So.  
Federal Way WA 98003

Sea-Tac International Airport Part 150 Study  
Public Open House  
Dec. 2nd, 1999

*Comments  
response*

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Comments:

I came to the one in 1997 or 1998 at Highline H.S. Cafeteria. I filled out ~~the~~ this sheet then with address + phone ~~like~~ like below. I have heard nothing. Thanks to Rose Clark, I am here tonight. I represent Ambaum Square Condominium Association of Apartment owners. We are 100 feet at the most west of Des Moines Memorial Drive between S. 171E and S. 176E Sts. The Board of owner-directors has again sent me to try to <sup>again</sup> communicate to folks like you doing studies to give our owners a satisfactory

Optional:

Name:  
Address (City, State, Zip):  
Phone: 206-243-7071  
Fax: ~~206-243-9843~~  
E-mail: ~~XXXXX~~

Files  
30  
baum  
L  
453

→ oldest living  
files.com

Explanation as to why our buildings and our single-family neighbors to the north along Des Moines Memorial Drive are <sup>likely</sup> going to be more affected by noise on the east side of Des Moines Mem. Dr. caused by a 3rd Runway when it is in place. Thank you. We are interested. are we  
Pres: [Signature] 12/2/99

Sea-Tac International Airport Part 150 Study  
Public Open House  
Dec. 2<sup>nd</sup>, 1999

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Comments: I would like to have a copy of monitoring sites and times of the day that noise measurements are being taken for the SeaTac airport noise study. My home looks over the SeaTac runway. Will like to know noise measurement for my area.

Optional:

Thank you,

Name: LUI WONG  
Address (City, State, Zip): 1126 S.W. 168TH ST, Seattle, WA. 9816.  
Phone: 206-244-6457  
Fax:  
E-mail:

Sea-Tac International Airport Part 150 Study  
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Dec. 2<sup>nd</sup>, 1999

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Seattle WA 98122

At any time.

You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net).

Comments:

We own a mobile park at  
14215 Des Moines Mem. Dr. 98168. We would  
like some information about what to tell  
our tenants to keep them from moving out.  
We have 28 rental units. It is getting more  
difficult all the time to keep them rented.  
The noise is beyond belief.

Optional:

Name:  
Address (City, State, Zip):  
Phone:  
Fax:  
E-mail:

Thank You  
Charlotte S. Fulford  
14215 Des Moines Mem. Dr  
Burien, Wa. 98168  
206-244-1513

Sea-Tac International Airport Part 150 Study  
Public Open House  
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Comments:

I live on 12<sup>th</sup> Ave South in SeaTac  
I have called many times on the  
noise of planes. I need my house  
insulated before I get deaf. You  
insulated half a block away - it  
is time to come my way - please.

Please refer to 1998 Map.

(Noise remedy contour  
map)

Optional:

Name: *Danna Flynn*  
Address (City, State, Zip): *24832 - 12<sup>th</sup> Ave. So.*  
Phone: *206-824-1771* *SeaTac, Wa. 98198*  
Fax:  
E-mail:



Sea-Tac International Airport Part 150 Study  
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Dec. 2<sup>nd</sup>, 1999

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Comments:

Thanks for this opportunity. We appreciate the courtesy extended to us here at this meeting by the Port reps we met with. We are very concerned about no noise remedy <sup>solution</sup> for our street in Huntington Park in Des Moines. We live on 12<sup>th</sup> Ave. So. & our neighbor at 24720-12<sup>th</sup> Ave. So. had his house "sixed" and the Port says "oops - our mistake". This should not happen ~~and~~ <sup>however</sup> we should all be taken care of on 12<sup>th</sup> Ave. So. and the <sup>new</sup> runway runs on 12<sup>th</sup>. Please place a noise ~~meter~~ monitor on our block & see for yourself. All of the homes on 13<sup>th</sup> have been done

Optional:

Name:

Address (City, State, Zip):

Phone:

Fax:

E-mail:

Jan & Elaine Huntsman  
24719-12<sup>th</sup> Ave. So.

Des Moines, WA 98198

(206) 824-3989

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**To:** mjwest@prodigy.net  
**From:** Jon Marc Gearhart <marcgp@u.washington.edu>  
**Subject:** Comments on part 150 study  
**CC:**

I am using someone else's e-mail so please forward all comments to [kbclion@nwlink.com](mailto:kbclion@nwlink.com)  
 I attended the part 150 open house and had the following comments.  
 1) The flights should follow the Duwamish corridor and up the Sound minimum altitude of 7000 feet prior to turning over populated area'  
 2) Does the part 150 study assume the doubling of people (and presu planes) that the p[ort has projected between '98 and '08, m or is i today's flights in the data?  
 3) Please clarify the crossover issue and why we aren't using the e bay turn to the fullest extent possible.  
 4) The Study stated that they assumed a curfew over the Eastside fr 10p-6a. This is a false assumption. There is a curfew, but when deems the flight paths too full then they violate the curfew. Give '88 to '98 we had a doubling of flights in the area, that pattern full more often and the curfew is violated. Please clarify why you use this as a baseline.  
 5) Please clarify where and when we went from a ceiling altitude of 4000 and why this is not being used today.

Again -please forward responses to [kbclion@nwlink.com](mailto:kbclion@nwlink.com)  
 Sincerely,

→ Ronald E. Smith  
 Bellevue City Council Position #6

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To: MJWEST@prodigy.net  
 From: la brown <letrett@yahoo.com>  
 Subject: Flight-path  
 CC:

Hello,

Just read the article in the Beacon Hill News, Flight-path. I moved back to Beacon Hill 15 years ago after a 20 year absents. When I was a kid the planes where 'cool'.

Since my return I attended a few meeting at Jefferson Park but work late evenings and weekends so miss most meetings.

The increase in air traffic is obvious. Every morning I sit with my coffee facing north on 23rd at S Stevens.

I watch the plains come in approximately 15 sec apart. My car and shrubs are covered with black exhaust. My house, yes it was built in 1910, rattles like a earth quake. My TV reception becomes a screen of squiggles. There are a couple midnight or so routes that often wake me up with the fear a plain is crashing into the roof, itsounds so close.

I must sleep with the windows closed all year round or wake up with sinus problems.

The winter is more tolerable since most of the time my windows are closed. The summer is a different story. I have quit using my deck since the smell and noise is so loud one can not have a conversation.

I have called the air complaint line often. I requested being added to the noise abatement program and was told I was out of the zone, as the person had to repeat herself for a plane was flying over. I talked about the exhaust and was told no one else had complained. Guess I am seeing things. All in all I agree that the south end is being abused and dismissed. A silent voice does not mean one is not having problems. A variety of choices should be made to reach the diverse population in the Valley.

Thank you for allowing me to vent.

loretta brown


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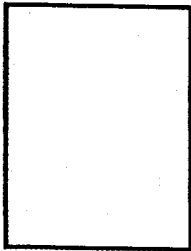
**Inbox**

**To:** mjwest@prodigy.net  
**From:** Caroline Kreiser <ckreiser@jonesandjones.com>  
**Subject:** JET NOISE  
**CC:**

- Get New Mail** [x]
- Reply** [x]
- Forward** [x]
- Delete** [x]
- Print Preview** [x]
- Close** [x]

Hello,  
 I just saw the flyer re: the proposed split east turn for airplanes  
 a resident of Columbia City I am strongly opposed to this idea and  
 plan to attend the community meeting on December 9. I am sending y  
 this e-mail to be added to the "mailing list" for further updates.

Thank you,  
 Caroline



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About.com asks... Do you support the death penalty?  
 Yes  No  Depends on circumstances

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To: mjwest@prodigy.net  
 From: Caroline Kreiser <ckreiser@jonesandjones.com>  
 Subject: Re: JET NOISE  
 CC:

Michael:  
 Thank you for getting back to me. I'll make a note of the meeting change! My snail mail address is: 4425 - 42nd Avenue South, Seattle 98118.


See you on Thursday,  
 Caroline

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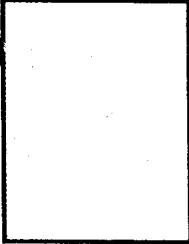
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**To:** MJWEST@prodigy.net  
**From:** "Nancy Du" <nancydu@postoffice.worldnet.att.n>  
**Subject:** JET NOISE COMING YOUR WAY  
**CC:** richard.conlin@ci.seattle.wa.us

I am writing in response to the proposed change in Sea-Tac Airport paths over South Seattle. I am a Columbia City resident of eight ye you are probably aware, Columbia City as a designated historic dist economically has struggled over the years to survive. This situatio delicate. Many new businesses and residents have come and we seem o brink of "success." I believe that rerouting more airplanes over the Columbia City district could be devastating. We seem to be prac constantly buzzed by flight noise as it is, perhaps mostly from Boe also from Renton. I do not believe an equitable solution to the fli situation is to reroute flights to the south at a lower altitude wi tighter turn over Columbia City and Seward Park. This would seem to negative higher impact than any "gains" that would be made. I would also appreciate your looking to other alternatives, maybe more flig Elliott Bay or stricter regulations on how much noise a plane can m you for your attention to and consideration of this matter.



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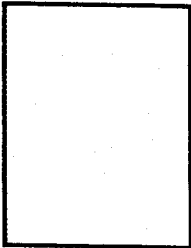
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To: mjwest@prodigy.net  
 From: "Stanton J. Barnes" <stan@aa.net>  
 Subject: Mercer Island Air control corridor  
 CC:

Has anyone suggested that aircraft departing SeaTac or King County vector to a leg over Lake Washington, turn over the large body of w between Leschi and Meydenbauer Bay, and depart thence?

All this fuss about the Blue Angels, and daily commercial traffic d use the leg over the lake, where there are no houses, extremely spa boats, and no people.

Send the planes where the folks don't live. Then no one need comp  
 Stan Barnes



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November 30, 1999

Port of Seattle:

I wish to express my deep concern and opposition to the new proposed flight track over the middle of Mercer Island.

This island community was not developed over the years with this type of air traffic as a factor. Our homes, schools, and public library were not built to deal with type of potential noise. You can not suddenly jump from "normal" to a "high" level of noise.

What affect do you think thundering jet aircraft would have on infants, toddlers, and pre-schoolers at home, or in daycare facilities when the jets suddenly come over and the noise hits? (Have you considered the geography of Mercer Island itself in terms of noise impacts? The east side of MI will get a sudden and substantial backblast.)

How will the new flight track and noise impact our teachers ability to communicate with students in the classrooms?

These planes would be flying at lower levels, turning closer, and accelerating over our 3 elementary schools, a middle school, and a high school. (This is quite a different story than at Medina.) There are also many senior and community centers, as well as parks and preserves that would be impacted.

Preserve the peace, not just here, but between all eastside communities. This proposal, and opportunity for "some", has started a political war. Will this new plan be a benefit for all? The answer is no. Please leave well enough alone and drop the plan.

Thank you.



Laura Balchunas  
7380 85th Ave SE  
Mercer Island



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**To:** mjwest@prodigy.net  
**From:** User865741@aol.com  
**Subject:** (no subject)  
**CC:**

- 
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My husband and I attended the meeting on December 8th, 1999 here on Island. We are residents of Mercer Island, bought our house here i are located on the southeast end of Mercer Island.

Mercer Island is very crowded, every buildable lot has been built u There is already a lot of noise here. We hear all the small planes at the Renton airport (and there are lots of them) and all the trai addition to all the other noise.

We are opposed to having Dr. Bob Rudolph represent us and we are op the split track proposal. Please consider the Duwamish corridor. please consider building a new airport.

Sincerely, Elizabeth & Graham Bingley, 7808 89th Place SE, Mercer 98040

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12/2/99

● My STRONG OBJECTION TO THE NEW PLAN FOR FLYING OVER MERCER ISLAND AND REDUCING THE HEIGHT IN WHICH THE AIRPLANES WILL BE MAKING THEIR TURNS FOR THE EASTERN DESTINATION IS IRRESPONSIBLE CONSIDERING THE RISK TO PEOPLES HEALTH AND POLLUTING THE ENVIRONMENT. WE CAN'T ALWAYS ALLOW THE AIRLINE COMPANIES TO PLAN FOR THEIR CONVENIENCE AT OUR EXPENSE.

LISA L. Bloom  
3844 W. Mercur Way  
Merced, CA 95324

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To: mjwest@prodigy.net  
 From: "Paul Booth" <pbooth@home.com>  
 Subject: Part 150 Split north flight path  
 CC: Tom.Dempsey@metrokc.gov stravis999@aol.com roy@semap  
 wensman\_mi@leg.wa.gov nancymatt@juno.com linda@unitype.  
 joannes@johnlscott.com horn\_ji@leg.wa.gov ballasio\_id@leg.wa  
 gary@unitype.com frankc@johnlscott.com lizbu@email.msn.co

From Paul & Melinda Booth, Mercer Island residents ---

We attended the public information meeting at Mercer Island High Sc evening from 7:00 till 9:35.

We have read all the information available at the meeting and heard questions and answers given.

We feel compelled to register our opinion on this matter.

The Citizen's Advisory Committee CAC does not fairly represent the communities impacted by the flight plan proposals. Mercer Island, Bellevue, Mount Baker, Issaquah, and Newcastle are n absent. The only current representation is from communities which a currently adversely effected by the airport noise. Their goal is t their own noise to other communities. This bias must be made publi opinions of all impacted communities sought and registered before a recommendations can be issued. Even though Rob McKenna, King Co. C has tried to remedy this with new committee appointments from Bell Issaquah, it is too late for these two new voices out of twenty to real impact before January 19th when a recommendation will be subm the CAC.

Despite the Consultant's reassurance that the CAC is not the only v listened to, we find it disingenuous to call this a Citizen's commi it is really a special interest group.

The lack of any proposals to go west or north shows the lack of consideration of all possible options. The Duwamish Corridor could the current east turn noise without shifting it to & severely impac residential communities.

We feel the Port of Seattle Commission, the Consultants, Bernard D & Co., & the Citizen's Advisory Committee have all failed to honor guiding policies to Improve overall noise environment and not shif from one residential community to another. The split east turn prop violates both of these policies and should not be an option to be under any circumstances.

Also by violating their own guiding policies they have deceived the communities affected by the split east turn without providing them

warning or representation on the Citizen's Advisory Community. While not have been intentional the results are inherently unfair and are without representation of the entire community.

The 1987 study of scatter type flight plans such as the 'Split East' showed this to be a flawed policy impacting far more people than co plans.

The Consultant's Part 150 noise impact data clearly discredits the plan showing significant increases in the number of residents harmed and an increase in overall community air noise.

Our final major concern underlies all of the above .  
The CAC was selected by the Consultants.  
The Consultants were hired by the Port Commission,  
The Port Commission relies on its clients, the airlines for its inc  
The airlines save money on fuel with the east turn & especially th  
turn at the expense of the citizen's quality of life.

To meet the guiding policies of reducing noise for all Puget Sound residents, we would have all northbound flights directed up the Du Corridor to Elliot Bay, north over Puget Sound till five thousand then turn east. This uses a little more fuel and significantly improves quality of life for all residents. We would be glad to pay a few million for plane tickets in exchange for being able to live free of noise pollution.

Thank you for considering our views,

Paul & Melinda Booth

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 rconrad@ci.mercer\_island.wa.us bscairms@home.com  
 MJWEST@prodigy.net seymour.r@portseattle.org

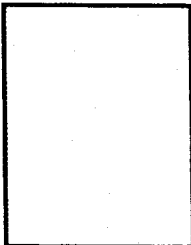
From: BONIGUS@aol.com

Subject: Re: Jet flights over Mercer Island

CC:

My name is Scott Bowen and I live in Somerset. I am opposed to r planes over Mercer Island and Somerset on take off. If the alterna

an extra few seconds but affects fewer people, then I think that sh the choice. If it costs more to run planes in that direction, then should be carried by those who use the airlines, not the people who the ground and have no choice in whether a plane flies over their r at maximum thrust.



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ember 1, 1999

This letter is to voice my dissatisfaction with proposed change to the takeoff to the North pattern. Currently the pattern requires departing aircraft to go to an altitude and then turn, which the Medina area objects . So to make more people miserable the Port is asking for an altitude of 4000 feet—and then turn. Great logic ! MY QUESTION IS WHY CANT THE FLIGHT PATH BE CHANGED SO THAT AIRCRAFT RISE TO 8000 FEET BEFORE TURNING ??? The planes will be higher and further North which should minimize noise.



Raymond Cutler  
8557 SE 76<sup>th</sup> Place  
Mercer Island, Wa 98040

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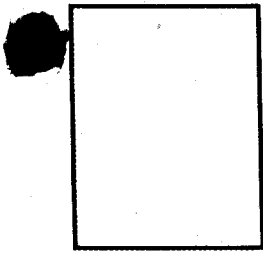
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To: Rob.McKenna@metrokc.gov rconrad@ci.mercer\_island.wa.us  
 seymour.r@portseattle.org bscairns@home.com MJWEST@pro  
 From: "Bill Clements" <redeemer@jps.net>  
 Subject: voicing my concern  
 CC:

Dear representatives of our Mercer Island Community to to Seattle P Authority.

I live on the South End of Mercer Island. I am also pastor of Redee Lutheran Church on the South End of Mercer Island. I am very upset possibility that so MANY airplaines will be taking off right over M such a low altitiude. It is imperitive that an alternative to such found. There is no reason a large percentage of those flights could off using the air space of the bay. I will stay informed on this. I know what you are doing to find reasonable alternatives? Thanks Re Clements



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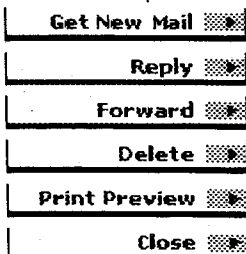
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Heaven and Hell meet at 23,000 feet.

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To: rob.mckenna@metrokc.gov rconrad@ci.mercer\_island.wa.us.wi  
bscaina@home.com MJWEST@prodigy.net seymour.r@portsea

From: "seth" <seth@srdassoc.com>

Subject: Sea-tac part 150 Noise Compatability Study

CC:

To whom it may concern:

How is it possible that we are at the eleventh hour in this process every Mercer Islander I have spoken to in the last two weeks is jus about this issue? Where and when have there been any public forums meetings, notifications, etc.? We Mercer Islanders care deeply and actively involved in our community - had this issue been put before earlier, I would bet that it would not have progressed to this poin of course, begs the questions - Why were we not informed in any mea way, and who was responsible for this shocking breach of our legisl process?

It is readily apparent that our District 6 representative, Dr. Robe Rudolph, has a conflict of interest. He has a vested interest in t decision as he has been upset with the amount of Jet noise over his home for years. We do have elected officials and scores of educate professionals on Mercer Island. While it may be argued that a non-representative was needed; it defies logic and common sense to choo seems to be the worst possible candidate for the job. One wonders choice was a lapse in judgment for Rob McKenna or a clear disregard residents and community of Mercer Island.

Jet travel over central Mercer Island will cause a dramatic change tranquility of the community. Ask any newcomer to Mercer Island - likely chose to move here because of the wonderful quality of life. here have chosen to pay significantly higher real estate prices and taxes in exchange for award winning schools and a peaceful, small c environment. I chose this community to raise my own family for the reasons. The flight path change will destroy what has been created nurtured here for generations and could result in big financial los many residents. It has been well documented that jet noise leads t property values. In some cases, property values have dropped 50 pe when new flight paths were created over communities that were peace to the change.

Those living in communities under the current flight paths purchase homes knowing what they were getting into. Real estate prices in t areas reflect the issue of jet noise. If residents in those areas complaining, they should have researched their community more befor purchased a home. However, now that they have chosen to speak up,



not necessarily follow that we should bear the burden of creating a tranquil community for them.

Dr. Rudolph keeps mentioning the value of transferring jet noise fr Mercer Island to central Mercer Island. Is he unaware that central Island is completely residential and that the "north-end" is largely businesses, mixed with residential? Clearly, this proposal is the scenario for Mercer Island residents.

There has got to be some compromise to be reached. With Puget Soun close by, why is it necessary to destroy thriving, viable communiti can't jets fly over less populated areas? What we need is time to issue and make an INFORMED decision. Clearly, we have been denied privilege by those appointed to represent our interests. I urge th committee of this study to consider these points and to extend the date. This will allow more Islanders a fair chance to speak up now are all being slowly and painfully introduced to this issue.

Sincerely,

Celestine Davis  
4917 East Mercer Way  
Mercer Island, WA 98040  
206-232-6643

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To: rob.mckenna@metrokc.gov mjwest@prodigy.net  
From: steve elliott <aselliott@home.com>  
Subject: The proposed split jet path  
CC:

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Copies of this e-mail will be mailed via the US Post to Gina Marie Lindsey, the Port Commissioners and Dr. Robert Rudolph.

Dear Mr. West and Councilman McKenna,

I am new to this issue and to the process of working within the pub forum. Hopefully you and the others who read this will give me lat as I am early in the learning curve.

First I am confused as to why we are discussing a split air traffic pattern over Mercer Island. It is my understanding that the direct and goals of the Part 150 study was to reduce the number of people affected by aircraft noise. This plan fails to accomplish this goa directive. I also understand a goal is to improve the overall nois environment yet the proposal only moves the noise from one communit another. I also believe the proposal is to focus on reducing the highest levels of noise without affecting another community adverse The proposal provides little to no to benefit the Rainier Valley an areas directly North of SeaTac Airport which are the communities experiencing the "highest level of noise" while benefiting Leschi, Madrona and Medina which are not the highest levels of noise. Shou low level turn from a large jet create additional noise it could be easily argued that the current communities experiencing the "highes levels of noise" would denigrate even further.

I do not know the definition of increased noise per the perimeters this study, however, I could certainly make a good point that impac an additional 250,000 people is an increase in noise. I believe th the increase population impacted by jet noise under the split traff plan per the report.

This report is terribly incomplete in that it fails to address all the air traffic in the impacted area. The report also only has 2 measure points on areas of increased traffic and over 12 points of reduced traffic from the split traffic plan. Many of the points of measure of reduced traffic are within blocks of one another causing same jet to measured many extra times over the same population base while ignoring much of the population impacted by the increased imp over Seward Park, Mercer Island, New Castle, Newport, Sommerset, No Renton, Issaquah and Kennydale.

Gail Ross Eidingen  
8406 S.E. 53<sup>rd</sup> Place  
Mercer Island, WA  
98040

December 1, 1992

To: Port Authority / Seatac Authorities  
Re: Split Flight Track Proposal over Mercer Island

We should like to express our opposition to the proposed split flight track resolution currently being considered. Given that flights would be required to make easterly turns over Mercer Island, earlier in their flights, and therefore at lower altitudes than they currently do at more northerly points, the result would be extreme noise exposure to populations residing in this more southerly region. Further, safety issues related to lower altitude and earlier eastward turns are worrisome.

We should like to express our absolute opposition to the changes being proposed, and urge that the current flight tracks remain unaltered. While we understand that the more northerly neighborhoods that are currently impacted wish to change their status quo, the proposed changes would result in a much greater negative impact upon Mercer Island with flights below 6000 foot ceiling, than the more northerly communities experience, at which point the flights are one mile higher in the sky. Their solution is not acceptable to Mercer Island.

Thank you for taking the time to read our letter.

David Eidingen M.D.

Respectfully  
Gail Ross Eidingen Ph.D.

Lastly I was truly shocked during the meeting last week at the airp by our representation. I am sure Dr. Rudolph is a fine and intelli gentleman, however he only represents his own interests. I was con at the meeting when he spoke of 55% of the traffic over my home whi reducing the same amount from above his own. I was amazed at the e when he requested that the plan move the Northerly path from the FA split plan of 9 miles back to the current 8 miles which would move of the traffic from his community and back on to North Mercer Islan speaking with some of my neighbors I find that Dr. Rudolph is quite famous for his long standing goal of moving the air traffic from hi neighborhood to another community. I have no understanding how in faith he has been chosen to represent anyone other than himself let alone the community to where he is attempting to move the air traff and the corresponding noise. I admire him for his fortitude, howev question his ethics in taking the responsibility of representation several communities when their needs have so many conflicts with hi personal agenda. I also have to question a committee and the Port Commissioners for allowing this kind of "representation" farce to masquerade as process. I chastise all of you for not only failing represent us but for exacerbating the lack of representation by knowingly allowing Dr. Rudolph to misrepresent us.

Most sincerely,

Steve Elliott  
[aselliott@home.com](mailto:aselliott@home.com)

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## Comments

Thank you for taking the time to comment on what you have seen and heard at tonight's open house. You may submit your comments now in one of the boxes marked "Comments", or you can mail them to:

Michael West  
1122 E. Pike St. #1286  
Seattle WA 98122

At any time.

You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net).

Comments: I am extremely upset that a split flight track is being considered here and I am even more upset that Mercer Island does not have anyone representing us! It makes absolutely no sense that the overall impact on the area will be to increase by 23% the total population exposed to this type of noise level! This does not solve the problem. I am in favor of expanding the utilization of the Duwamish Corridor. This makes the most sense for everyone here. I grew up living under a flight track and it was very disruptive and stressful. It especially affected all the classes at the school I went to. Teachers had to pause frequently to let the planes pass over before they could explain things or speak. It was highly disruptive. We pay dearly to live on this island because the schools are exceptional and so is the quality of life. I will do everything in my power to protect this quality of life... the proposed flight track will certainly ruin it!!

Optional:

Name: Margo Goyette  
Address (City, State, Zip): 4506 Forest Ave SE Mercer Island, WA 98040  
Phone: 206-232-0610  
Fax:  
E-mail: [margog@roi-intl.com](mailto:margog@roi-intl.com)

From Dec 8 Forum - City of Mercer Island / Port of Seattle

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To: MJWEST@prodigy.net seymour.r@portseattle.org  
 From: "Ellie Gittelman" <ellieg@home.com>  
 Subject: No Increased Jet Noise Over Mercer Island  
 CC:

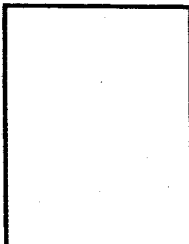
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Dear sirs,

I oppose the split turn proposal for flights over Mercer Island. I that if properly informed and with enough free time to do something about it, all of Mercer Island would rise up to fight. If I had purchased a home in Medina, I would know and expect the a that accompanies such a purchase. To change the rules of the game detriment of Mercer Island is unfair.

I also do not think that Dr. Rudolf was representing our interests.

Ellie Gittelman  
 5353 Lansdowne Lane  
 Mercer Island, WA  
 230-9932



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 From: Migoldens@aol.com  
 Subject: Re: Air noise contact  
 CC: tomheltzel@home.com

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December 6, 1999

Dear Mr. West,

I am a resident of Mercer Island who would like to address the air noise issue. Unfortunately I am unable to attend the meeting sched Dec. 8 .

The study of air traffic noise that has been reported in the local claims that Mercer Island does not get its fair share. Living at t end of the island, I get all sorts of noise from Renton Field. Pla overhead all day. From 6 in the morning to well into the evening. planes range in size from single engine propellers to private jets and 757s. The Boeing jets stay over the water (although they are s enough), but most others use either Island Crest Way or the east co

Island as guides for their final approach into the airfield. Most planes fly below 1000 feet and are loud. The noise they generate occasionally even shakes my windows and scares my two children.

Adding SeaTac traffic over Mercer Island will increase the local no further. If a fair study is to be done, why is the noise from Rento not taken into account?

I am in favor of a Puget Sound Noise Management Program, but it sho reflect the true noise levels generated by all the local airports. less is unscientific and a political manipulation of information. Thank you for your consideration.

Sincerely,  
 Susan L. Golden  
 6218 89th Ave., SE  
 Mercer Island, WA 98040  
 migoldens@aol.com

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Sea-Tac International Airport Part 150 Study  
Public Open House  
Dec. 2nd, 1999

Comments

Thank you for taking the time to comment on what you have seen and heard at tonight's open house. You may submit your comments now in one of the boxes marked "Comments", or you can mail them to:

Michael West  
1122 E. Pike St. #1286  
Seattle WA 98122

At any time.

You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net).

Comments:

I AM VERY CONCERNED WITH THE RAPID SPEED THIS INITIATIVE IS MOVING AT RELATIVE TO THE ABILITY OF AFFECTED FAMILIES BECOMING AWARE OF THE ISSUES UNDER THE SPLIT PATH.

MY BIGGEST CONCERNS ARE THE IMPACT ON OUR HOME VALUES, EDUCATIONAL QUALITY, AND ABILITY TO ENJOY THE PEACE AND QUIET THAT ATTRACTED US TO OUR NEIGHBORHOOD.

CAN IT BE SAID THAT THE DUWAMISH PATH HAS NOT BEEN UTILIZED AS WELL AS POSSIBLE GIVEN OUR ADVANCES IN FIGHT TRAFFIC CONTROL? IF NOT, WE SHOULD FULLY EXHAUST THAT DIRECTION FIRST. IT WOULD MINIMIZE THE INFIGHTING BETWEEN NEIGHBORHOODS.

Optional:

Name: MARC BOYETTE  
Address (City, State, Zip): 4506 FOREST AVE, MERCER ISLAND, WA 98040  
Phone: 206 232 0610  
Fax: 206 232 6314  
E-mail: [MARC6@ROI-INTL.COM](mailto:MARC6@ROI-INTL.COM)



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robertrudolph@vmmc.org gimdjh@vmmc.org steffin@jps.net

From: DHanson616@aol.com

Subject: Part 150 Study

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To whom it may concern:

I am a Mercer Island resident and homeowner who recently learned of of Seattle's proposal to send jets over central Mercer Island. My resonse was total shock, which has turned to anger.

I am upset that most Mercer Islanders are learning about this propo eleventh hour. In the last few days I have been alerting every Mer Islander that I know and most have not heard about this crucial iss tells me that our District 6 representative, Dr. Robert Rudolph, ha negligent in keeping our community informed.

Might it be that there is a conflict of interest? Dr. Rudolph has interest in the Port's decision as he has been upset with the amoun noise over his Medina home for years. Clearly, Rob McKenna did not representative who was non-biased. I have a problem with this.

If it appears that Mercer Island does not care abound this change i paths, it is only because most Islanders are totally uninformed. E Mercer Islander that I have encountered strongly opposes this chang multiple reasons.

First, and most obvious, Jet travel over central Mercer Island will dramatic change in the tranquility of Mercer Island. Ask any newco Mercer Island - they likely chose to move here because of the wonde quaility of life. Most here have chosen to pay higher real estate prices/property taxes in exchange for award winning schools and a p small community environment. I grew up on Mercer Island and chose community to raise my own family for these exact reasons. The fli change will destroy what has been created here for generations and result in big financial losses for many residents.

It has been well documented that jet noise leads to lower property In some cases, property values have dropped 50 percent when new fli were created over communities that were peaceful prior to the chang fair is this to impose on Island residents who have paid higher rea prices/taxes to live in a tranquil, small community? Is it fair th Islanders will likely take large losses on the sale of their homes,

they have to move?

Those living in communities under the current flight paths purchase homes knowing what they were getting into. Real estate prices in t reflect the issue of jet noise. If residents in those areas are co they should have researched their community more before they purcha home.

I am not suggesting that those residents do not have the right to s however I am speaking up about my community and I feel that Mercer have so much more to lose.

With Puget Sound so close by, why is it that jets cannot fly over l populated areas? That would clearly be a win-win solution for resi all communities.

Speaking of less populated areas, Dr. Rudolph keeps mentioning the transferring jet noise from north Mercer Island to central Mercer I

he unaware that central Mercer Island is completely residential and "north-end" is largely businesses, mixed with residential?

Clearly, this proposal is the worst scenario for Mercer Island residents.

I urge the committee of this study to consider these points and to decision date. This will allow more Islanders a fair chance to spea that the word is slowly leaking out.

Sincerely,

Deborah Hanson  
4905 East Mercer Way  
Mercer Island, WA 98040  
206-236-3091

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**To:** MJWEST@prodigy.net seymour.r@portseattle.org  
**From:** Tom Heltzel <tomheltzel@home.com>  
**Subject:** Additional Corrections to Summary of Flight T  
**CC:**

In reviewing the 11/29/99 summary report, it came to my attention t the flight track alternative maps on page 3 do not include the curr East Turn turbo-prop traffic. Turbo prop traffic following this fl path turns east immediately after leaving SeaTac under north flow conditions and crosses the south end of Mercer Island. While the t does refer to "jet" flight paths, the illustration is misleading as it fails to show all the components of the east turn. The maps should updated, or as a minimum, page 3 should carry a notation such as "Current East Turn turbo prop traffic departing SeaTac under north conditions and crossing the south end of Mercer Island is not shown

In addition, to eliminate confusion on a related matter, the report should carry the disclaimer "This report does not include the exist impact of aircraft noise originating from Renton Airport, The Boein Company Renton plant, Boeing Field (King County), or SeaTac turbo p traffic."

Under north flow conditions, much of this existing noise impacts ar beneath the proposed SUMA tract of the split east turn more than ar beneath the current path.

Regards,

Tom Heltzel

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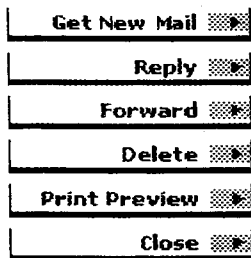
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**Inbox**

**To:** MJWEST@prodigy.net  
**From:** Tom Heltzel <tomheltzel@home.com>  
**Subject:** Corrections to Summary of Flight Traffic Alte  
**CC:**  
**Attachment:** Air\_Noise\_Report\_Analysis\_-\_Heltzel\_11-30-99.doc ([view it](#))



Michael,

**Subject:** Corrections to Summary of Flight Traffic Alternatives, dat 11/29/99

I have reviewed the subject document, and the detailed document of 11/3/99 from which it was derived. There are several inaccuracies, inconsistencies and ambiguities that should be corrected in your ne update of this summary. These are outlined below:

1. The 11/3/99 document states, on page III-2, that about 55% of th east turn traffic follows SUMA, and 45% follows Mountain. In discussions with Mr. Dunholter, I learned that the model was run us 50%/50% split. Apparently, this represents the "annual average" traffic, and the summer traffic becomes about 55%/45% as stated. S the "north flow days" occur primarily in the summer, the "north flow day" data published understates the noise impact for the SUMA turn, overstates the noise implications for the mountain turn. The use o this data should be clarified, or the model re-run to reflect the a conditions.
2. The study data uses current aircraft-type fleet mix and traffic volumes to develop noise profiles. This will change significantly the 2003, 2005, 2007 time frame, which coincides with the potential operation of the split turn alternative. The phase-out of F-28 an MD-80 aircraft will significantly reduce the noise generated on the Mountain turn. As a result, the current data overstates the noise implications for the Mountain turn in the time frame following oper of this proposal. The model should be re-run with the appropriate future conditions reflected, and clarification of this point should included.
3. The location/site data on page 16 and 17 of the summary have bee widely misunderstood and misinterpreted. A disclaimer on their use should be included on each of these pages. To wit:  
 "The site/location data represents a set of arbitrary/discreet poin While this data is useful in looking at relative changes at a given

point, it can not be used to project impacts for general population. General population impact data is found elsewhere in this report."

4. The "potential sleep awakening" data does not include the 75-85 SEL "windows open" case. This case is very important in the Seattle area, as north flow days typically occur in the summer or during nice weather, in our "non-air conditioning" climate, people typically sleep with windows open. The 75-85 SEL case with windows open provides 60 SEL at bedside, and 6% of such people affected would potentially awaken. The 75 SEL profile covers a large population, particularly in the southeast turn scenario. Not including this data greatly understates the sleep awakening impact of the split east turn. This data should be included in the report and summary.

5. The text comments on page 10 of the summary are erroneous, ambiguous and/or incomplete:

The Comment for Time Above/Speech Interference (split track) reads "Alternative spreads the operations so that there are fewer people with higher levels of time above (8,200 people) on north flow days, more people with lower levels of time above (47,600 people.)"

In addition, a consistent methodology and criteria should be used to indicate those "Areas" which have Reduced or Increased impacts, or this row should be dropped. As it is currently stated, areas like Clyde Hill, which are not a "location" are included, and highly impacted areas like Seward park are excluded. It would be less misleading to not include this row, and/or alternatively include tables on percentage change by location for each of the measures (time above, highly annoyed and speech interference). Such tables were included in my report to the study committee dated 11/30/99 and delivered at the 12/1/99 CAC/TAC meeting. For your convenience, I have attached an electronic copy of this report.

Thank you for including these clarifications and corrections in your next summary report.

Tom Heltzel

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Mr. West,

Please enter the following commentary into the record for the current Part 150 study:

The process being used by the Port of Seattle's Air Noise "Part 150 Study" Operations Subcommittee to pursue changes to flight tracks off the current East Turn on "north flow" days is seriously broken. The greater Seattle community will be the loser unless a new direction is taken.

**Objectives Skewed**

The original objective of the subcommittee was to study total noise reduction. This has evolved into a de facto objective of shifting between communities. While helping some, the proposed Split East Turn would bring substantially increased airplane noise to thousands of Seattle-area residents, not decrease the noise overall, and gives no indication of increasing the accumulated noise impact on the greater Seattle community.

**More People Hurt Than Helped**

Contrary to some claims of proponents of the Split East Turn, it would not result in true "dispersion" of noise, but would instead create two concentrated noise corridors where, for the past several decades, there has only been one. The data presented by the study team clearly shows that 6-9 times as many people would be hurt by this proposal than would be partially helped.

**Disenfranchised Communities**

Many communities have been disenfranchised from this process by the unbalanced structure of the Citizen Advisory Committee. What's more, certain "representatives" have long histories of promoting parochial interests. It is little wonder that the Split East Turn proposal would have the greatest negative impact on the communities under-represented.

exposing thousands of additional residents to new aircraft noise.

#### Environmental Impacts

There are many unique environmental aspects of the Seattle area. One of them is the fact that four nesting pairs of American Bald Eagles live in Seward Park and on Mercer Island, right in the middle of a major metropolitan area! These nests are directly under the southern part of the proposed Split East Turn. The noise levels generated by 120 jets per day would have a devastating impact on the habitat of these protected raptors and likely drive these American icons back to the wild. This and other environmental issues have been completely disregarded by this study.

#### Divisive Process

And most unfortunately, the broken process underway is extremely divisive, setting community against community and neighborhood against neighborhood in a win-lose battle. What should be in place is a win-win process involving all the communities surrounding Lake Washington. Together, we should work with the Port and the FAA to eliminate the "temporary" East Turn and return peace to the skies of Seattle's beautiful Lake Washington.

#### Utilize the Duwamish

The "temporary" east turn was established in 1972 and expanded in 1987. Prior to that time, the Duwamish industrial corridor and Elliott Bay were Seattle's "natural air noise abatement corridor," was the sole route out of the city on north flow days. With new navigation tools such as this route can effectively be used to move the noise back over the water and not over the people. This can create a true win-win situation for the greater Seattle community.

#### Summary

The divisive process and proposals that are underway should be killed, our energies directed towards creating a real, win-win solution for our communities:

- Expand utilization of the Duwamish corridor
- Accelerate replacement of F-28's, MD-80's, DC-8's
- Extend the East Turn curfew hours
- Establish and enforce Noise Abatement Flight Procedures

Go West!  
Fly Quietly!

Sincerely,

Thomas G. Heltzel

Move this message to:

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Public Open House  
Dec. 2<sup>nd</sup>, 1999

Comments

Thank you for taking the time to comment on what you have seen and heard at tonight's open house. You may submit your comments now in one of the boxes marked "Comments", or you can mail them to:

Michael West  
1122 E. Pike St. #1286  
Seattle WA 98122

At any time.

You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net).

Comments:

Regarding the north flow east turn alternatives:

I have felt extremely disenfranchised by the structure of the representation & by the fallacious analysis foisted on the committee by certain representatives, & by some members of the committee seemingly "led on" by such mis-leading work.

Optional:

Name: Tom Heltzel  
Address (City, State, Zip): Mercer Island, WA 98040  
Phone:  
Fax:  
E-mail:



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1122 E. Pike St. #1286  
Seattle WA 98122

At any time.

You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net).

Comments:

Regarding the North Flow east Turn:

In the natural course of events, the replacement of F-28 & MD-80 aircraft will provide significant noise relief to current recipients, ~~without~~ in the same relative timeframe as a major flight track change, without ~~the~~ impacting new & larger communities.

Optional:

Name: Tom Heltzel  
Address (City, State, Zip): Mercer Island, WA 98040  
Phone:  
Fax:  
E-mail:

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At any time.

You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net).

Comments:

Regarding the North Flow East Turn:

After thorough analysis of the data, it is very apparent that there is not a compelling case for ~~such~~ to make as extreme a flight track change as the proposed east turn.

Optional:

Name: Tom Heltzel  
Address (City, State, Zip): Mercer Island, WA 98040  
Phone:  
Fax:  
E-mail:

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Seattle WA 98122

At any time.

You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net).

Comments:

Regarding the North flow east turn:

The only win-win solution is to send as many East turn planes out the Duwamish corridor as possible.

Optional:

Name: Tom Heltzel  
Address (City, State, Zip): ~~824555~~ Mercer Island, WA 98040  
Phone: 206-232-8226  
Fax:  
E-mail: [Tomheltzel@home.com](mailto:Tomheltzel@home.com)

Sea-Tac International Airport Part 150 Study  
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Michael West  
1122 E. Pike St. #1286  
Seattle WA 98122

At any time.

You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net).

Comments:

Predictability is necessary for flight  
tracks. People make choices and need to  
know

Optional:

Name: Carol Heltzel  
Address (City, State, Zip):  
Phone:  
Fax:  
E-mail:

Sea-Tac International Airport Part 150 Study  
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Dec. 2<sup>nd</sup>, 1999

Comments

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Michael West  
1122 E. Pike St. #1286  
Seattle WA 98122

At any time.

You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net).

Comments:

Predictability is necessary. People  
make life & home choices

Optional:

Name: *Carol Heltzel*  
Address (City, State, Zip):  
Phone: *232 8628*  
Fax:  
E-mail:

Sea-Tac International Airport Part 150 Study  
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Michael West  
1122 E. Pike St. #1286  
Seattle WA 98122

At any time.

You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net).

Comments:

The communities would all benefit from Duwamish departures. The Expert Panel agreed that this was possible. This needs to be looked at before making East turn decisions

Optional:

Name: *Carole Heitzel*  
Address (City, State, Zip): *8245 SE 61st St*  
Phone: *206 232 8626* Mercer Island WA 98040  
Fax:  
E-mail:

Sea-Tac International Airport Part 150 Study  
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Michael West  
1122 E. Pike St. #1286  
Seattle WA 98122

At any time.

You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net).

Comments:

We really need a serious evaluation of use of the Duwamish - Elliott Bay. We've been asking for consideration of possibilities since at least Medation (1984-1990.)

Optional:

Name: Lorelei Nerves  
Address (City, State, Zip): 8460 Eu. Nerves Way, WA 98040  
Phone:  
Fax:  
E-mail: [loirelei236@cs.com](mailto:loirelei236@cs.com)

6821 93<sup>rd</sup> Avenue SE  
Mercer Island WA 98040  
Thursday 2 December, 1999

Port of Seattle  
Part 150 Study Committee

Members of the Committee:

It has come to my attention that the Committee is considering a flight track change which would negatively affect the neighborhood in which I reside. Since such an action may cause me to have to change my residence and thereby cost me tens of thousands of dollars. I put to the committee whether there is an **overriding** need to implement this change. No neighborhood in Seattle can claim a need for quiet which overrides the need of any other. Nor should the Port be engaged in the business of redistributing audible industrial waste.

The question of fairness cannot enter into this discussion without opening a Pandora's Box. Inequities make up the fabric of life, and generally speaking, efforts to achieve any semblance of equity are too expensive to be practical. It is unfair, for example, that the people living near I-405 have to listen to the rush of traffic day in and day out. Their quality of life would doubtless be improved by placing the highway in a tunnel throughout its entire length. Yet this would be prohibitively expensive. It's not fair, but there it sits.

Shall we require jets from Sea-Tac to fly at low altitude over Shoreline, Monroe, Black Diamond and Port Townsend? It is unfair that these communities do not share at all in the burden of Sea-Tac's noise. Yet to route planes over them in an effort to share the noise would do nothing constructive and cost dearly in flight time and spent fuel. It's not fair, but there it sits. It soon becomes apparent that the idea of noise equity is fundamentally absurd.

Noise equity is also unachievable in another, subtler way. This is due to the nature of human perception, coupled with a simple fact of arithmetic. People perceive acoustical intensity on a logarithmic scale, so it is traditional to measure loudness in decibels (above some reference intensity). However, the addition and subtraction of logarithmic quantities can give surprising results. If you add aircraft noise with an intensity of 60dbA to ambient noise of the same intensity, the resulting noise volume is only 63dbA, barely a noticeable difference. If you subtract 60dbA of aircraft noise from a total noise load of just over 60dbA (it must be greater), the answer can be almost anything. The reason for this is that the loudest noise rapidly dominates any other noise source, and it is quickly beyond the precision of the measurement equipment or human perception to accurately gauge the contribution of the other components. Whether the reduction in noise perceived is 3db or 30db depends upon the quantity of noise due to other sources, and this must be measured in the absence of the aircraft noise to be quantified accurately.

There is no question that removing aircraft noise from a neighborhood will reduce its total noise load. But whether the change is significant is another matter entirely. That question depends heavily on the amount of noise emanating from other sources, and how effective they can be in eliminating the aircraft noise. Noise from a jet flying at 4000' one mile away is only 3db quieter than the same jet flying directly overhead. Sending the noise to your nearest neighbor cannot bring any significant benefit, while it is likely to annoy your neighbor's neighbor.

I submit that any effort to trade off noise levels db for db will fail: Because the louder noise dominates, the change in noise intensity that a fundamentally quiet neighborhood can experience is unconstrained. On the other hand, the amount of noise reduction that any neighborhood can enjoy is constrained by its ambient noise level. We must know this constraint and take it into account. If that is



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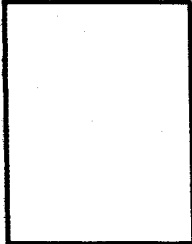
From: "pierreting" <pierreting@hotmail.com>

Subject: Dec 8 Forum - City of Mercer Island/Port of S

CC:

Was very disturbed by what I heard at forum. MI has been our home years and we would hate to see the Island destroyed by planes flyin frequently and at such low altitute. I completely agree that anot should be developed such as flying over the Duwamish valley.

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## To whom it may concern

Having lived on Mercer Island for 36 yrs. we feel we have had our share of Airport traffic without adding to what we have already had to contend with over the years. I am very aware of the fact, we want the convenience, but not in my back yard theory, but please, please quit picking on Mercer Island.

Signed:

*Mr. & Mrs. N. Baxter Jenkins*

Mr. & Mrs. N. Baxter Jenkins  
3854 West Mercer Way  
Mercer Island, WA 98040-3356

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rconrad@ci.mercer-island.wa.us mjwest@prodigy.net

From: "cvj" <cvj@operamail.com>

Subject: RE: Proposal to Modify North Flow, East Turni

CC:

SeaTac Part 150 Noise Compatibility Study  
Citizen Advisory Committee  
Attn Ron Seymour  
Seattle-Tacoma International Airport  
Noise Abatement Office  
P.O. Box 68727  
Seattle, WA 98168

RE: Proposal to Modify North Flow, East Turning Flight Track

December 9, 1999

The City of Mercer Island and the Port of Seattle have informed us Wednesday, December 8th of a proposal to modify the existing east t flight track procedure. As I understand the Sub-Committee's current on a "split track" proposal. As a citizen and resident of Mercer Island, I continue to be extremely concerned about such an alarming proposal. are my comments:

1. Representation - To my knowledge, there is no sub-committee mem living in Mercer Island nor any of the communities, such as Newcast Bellevue, that will be adversely affected by the split track propos has been no effort by the District 6 representative to meet with th citizens of Mercer Island and understand our interests and concerns

2. Split Track Moves Flights Over More Heavily Populated Areas at L Altitudes - As I generally understand the split track proposal, the track would direct 55% of east turning aircraft from current "over water" Lake Washington crossings to a path directly over Seward Park, the Mercer Island, South Bellevue, Newcastle and North Renton. The enti turning process for the southern track would also come at a substan lower altitude, in the 3/4000' range, regardless of whether the eig distance from SeaTac has been achieved. Noise level is inversely proportional to the square of the distance (altitude in this case). jet at 3000 feet is 4 times noisier than at 6000 feet ((6000/3000)/ Therefore the procedure will impact large populations at much highe

of noise than otherwise happens under existing procedures.

3. More people hurt than helped - The data from the flight track alternatives study clearly predict that the overall impact on the r will be to increase by 23% the total population exposed to noise le could affect speech 10-30 minutes per day, with 6-9 times more peop hurt by the proposed split turn that those who may expect only part relief. This study also examined the total regional population expo cumulative, annoying day-night noise levels on north flow days. The predict that 7 times as many people will experience significantly M than those who may expect only partial relief will. Additionally, t predicts that the total population exposed to potential night awake will increase by over 30%. Clearly, the split east turn does not pr true noise "relief" for the region and instead hurts far more peopl than it

helps. Residents of Mercer Island would, of course, along with resi Rainier Valley, Seward Park, South Bellevue, and Renton, bear essen the whole brunt of this increased exposure for the entire area popu

4. Mercer Island Already Receives Its Share of Noise - The current turn procedure brings a significant amount of noise over North Merc Island. In addition, the South end of Mercer Island, only a few mil the end of the SeaTac runway, frequently hear engine "run-ups" and take-off

noise from departing aircraft at both Boeing Field and SeaTac. Unli communities, Mercer Island residents are also impacted by noise fro Field, the Renton Boeing plant aircraft departures, and the Renton aviation and seaplanes airport.

5. An Environmental Review is Required - I expect that the Port of and the FAA will adhere to standards of rigorous environmental revi analysis, requirements of NEPA and SEPA including technical analysi public review and comment. As a resident of Mercer Island, I am dir concerned by the increased pollution of 125 commercial jets flying island and the disruption of wild life such as the Bald Eagles in S Park and Mercer Island.

6. Other solutions - I do not understand why the Port of Seattle an are not strongly considering other options, namely the West Turn ov Duwamish corridor and Elliott Bay (residential vs, industrial and commercial) as was the procedure before. By the Committee's own cri efforts to maximize the use of south flow arrival and departures as to use "west turn" flight tracks under north flow conditions should be given priority.

As a result of the above-identified negative impacts on this commun voicing my strong opposition to an adoption of the split track proc

Thank you for the opportunity to provide input on this matter.

Sincerely Yours,

Claus V. Jensen  
9325 South East 57th Street  
Mercer Island,  
WA 98040

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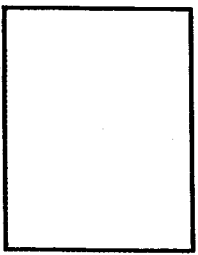
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bscairns@home.com MJWEST@prodigy.net seymour.r@portsea  
robertrudolph@vmmc.org gimdjh@vmmc.org steffin@jps.net

**From:** Glen Kasman <KasmaGl@goodsamhealth.org>

**Subject:** New flight paths over Mercer Island

**CC:**

This letter is to register my most strenuous objections to addition paths over Mercer Island. Whereas I respect the concerns of reside neighborhoods under existing flight paths, the solution is not to d planes over Mercer Island.



The existing flight path system has been in place for many years. majority of residents of neighborhoods presently affected by flight purchased their homes with the system in place - they made an infor decision or at least had the opportunity to do so. Residents of Me Island have paid a premium for their homes as well as continue to p property taxes - doing so because of the relative tranquility of th Transferring flight paths across the center of Mercer Island will drastically disrupt the quality of life residential areas, lower pr values, and blind side residents by going against one of the core r why they live there. It appears that Mercer Island residents have adequately represented in this process to-date, perhaps because of potential conflict of interest by the designated area spokesperson.

No one likes flight noise. And air traffic in the region has incre Nevertheless, it is not appropriate to subject additional neighborh the problem, especially with a plan that calls for new flight paths residential areas at lower elevations. I urge the committee to exp alternate options. Surely solutions can be identified that do not neighborhoods a little while hurting others a lot.

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## Comments

Thank you for taking the time to comment on what you have seen and heard at tonight's open house. You may submit your comments now in one of the boxes marked "Comments", or you can mail them to:

Michael West  
1122 E. Pike St #1286  
Seattle WA 98122

At any time.

You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net)

### Comments:

2/9/99  
I am vehemently against split East Turn with SUMA over Mercer Island due to unacceptable noise/air pollution over new areas at lower altitude, safety concern (i.e. potential crashes over heavily populated area vs over water), and inadequate consideration of other flight tracks.

I would recommend following alternatives:

1. Have SUMA fly west over Puget Sound avoiding east corridor.
2. Have SUMA use mountain tract and move mountain tract more north. This will make new mountain tract higher in altitude, thus creating less ground noise. Also since new mountain tract is for east bound traffic and not south, extra distance before turning east will be negligible while SUMA north bound distance before turning south stays same as current tract.
3. If no other alternative is acceptable (for some reason), keep the current tract as is since it has worked and is working fine.

Optional:

Name: MANS KIM  
Address (City, State, Zip): 4833 88th PL SE, Mercer Island WA 98040  
Phone: (206) 230-4216  
Fax: (206) 326-2094  
E-mail: [Kim.m@ghc.org](mailto:Kim.m@ghc.org)

From Dec 8 Forum - City of Mercer Island / Port of Seattle

Sea-Tac International Airport Part 150 Study  
Public Open House  
Dec. 2<sup>nd</sup>, 1999

Comments

Thank you for taking the time to comment on what you have seen and heard at tonight's open house. You may submit your comments now in one of the boxes marked "Comments", or you can mail them to:

Michael West  
1122 E. Pike St. #1286  
Seattle WA 98122.

At any time.

You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net).

Comments:

The noise studies do not include the impact of Boeing Field and Renton airport upon the areas most affected (Mercer Island, Seward Park, etc.) by the proposed new "Split Departures North" out of Sea-Tac Airport. Since this is true, any claims relative to the "equitability" of noise sharing from Sea-Tac are completely misleading. Such statements imply Sea-Tac is the only airport producing noise. This is deliberately misleading!

Optional:

Name: MARK KIRKONER  
Address (City, State, Zip): 7426 SE 71<sup>st</sup> St. Mercer Is. 98040  
Phone: (206) 237-8728  
Fax:  
E-mail:

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To: mjwest@prodigy.net lorelei236@cs.com  
 From: "Henry Lahore" <hlahore@aa.net>  
 Subject: FAN solution IS possible with FAA - but not r  
 CC:

I just attended the 150 meeting at Mercer Island - Dec 8, 1999  
 I also was in the Avionics group in Boeing which designed FMS syste  
 I agree - FMS can not be made to randomly fan out over a region.  
 BUT  
 FMS paths can be made different for each destination- thus spreadin  
 the noise.  
 Could easily have 40 different paths - not just two paths.  
 For example: every aircraft going to Phoenix would use the same fli

By the way:  
 Yes - FAA is very S L O W  
 The FAA is so slow at changing the ATC computers, that they are now  
 world's largest user of vacuum tubes.

Henry Lahore  
 206-232-7153 or 898-9431 cellular  
 Mercer Island, Washington  
[hlahore@aa.net](mailto:hlahore@aa.net)

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To: **Port of Seattle – Ron Seymour, Assoc. Planner & Chair of 150 Study**  
**City of Mercer Island – Rich Conrad, City Manager & Bryan Cairns, City Council**  
**King County Council – Rob McKenna**

**Part 150 Study & New Aircraft Departure Proposals**

*December 2, '99*

I am writing this letter after beginning to follow the discussion on this subject. I have concerns about the process/direction to date and how this might impact the thinking of the Port of Seattle and the FAA regarding this issue. I would like the following to be considered in the discussions as this policy issue moves forward:




- The 150 study charter is built around improvement and ongoing enhancement not moving a problem somewhere else. Noise is a pollution problem. Imagine if we dealt with toxic waste by a plan to just spread it over a larger area at lower concentrations. Great for now - a disaster later.
  - A “dispersion or split turn” approach will only increase the capacity for aircraft noise pollution which will even be harder to solve 5 years from now as traffic continue to grow. This type of approach really only accomplishes one thing – it takes the incentive off of everyone to really solve the underlying problem and is extremely shortsighted.
  - We have to expect more from the Port, the FAA and the airlines to make meaningful and substantive improvements for everyone concerned.
- There is an opportunity here to demonstrate new thinking and planning leadership in several possible areas rather than creating divisiveness among communities – who ultimately should be the beneficiaries of better approaches.
  - We are fortunate to have several large bodies of water around us (Duwamish, Puget Sound, Lake Washington etc) that can accommodate more concentration with minimal impact – but the FAA and the airlines have to help make this work within the context of the overall system. All of these possibilities should be pursued for long term relief not just the cosmetics of a dispersion approach.
  - Advocating for jet modifications, better route configurations, departure angles etc..
- The proposed split turn across Mercer Island and South Seattle raises several specific concerns as a resident of Mercer Island:
  - Low altitude turns – only magnify the sound impact of over flights.
  - Safety – Jets turning, climbing and crossing at < 4,000’ feet creates a significant safety issue in the event of an inflight problem.
  - Mercer Island already bears a significant share of public transportation noise from- 1) SeaTac traffic over the north end already 2) the I-90 corridor 3) I-405 corridor 4) Renton field both general and commercial aviation and 5) float plane traffic from Renton field in the summer especially. This is not an issue of Mercer Island not bearing its fair share of public facilities intrusion.
- Lastly, the representation and track of the Citizens Advisory committee to date seems bizarre at best. How can any other Eastside community feel represented by the current makeup? Especially when the proposal on the table passes traffic off to areas not represented. If the split turn idea really is on the agenda then every affected community should be represented at the table. This “equitable sharing” thesis is just “PR spin” on a ruse for self serving interests- not a democratic consensus of what’s best. We need constructive policy making not political type manipulation of a valuable process. That is why it is so critical that input from others in affected areas be carefully considered.

I appreciate the opportunity to make my views know on this important issue. Thank you.

**Mike Losh** 9425 SE 54<sup>th</sup> St. Mercer Island, WA 98040



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**Inbox**

**To:** Mjwest@prodigy.net  
**From:** "Nora MacDougall" <macdougall.n@ghc.org>  
**Subject:** proposed flight path change  
**CC:**

- 
- 
- 
- 
- 
- 

I object to the proposed split in Eastbound and Southbound flight p  
 We live on Mercer Island and the noise and jarring would be unaccep  
 to have all Southbound traffic over us. Do you know the proposed  
 altitudes for the planes in each of the proposed paths? I will be  
 of town and cannot attend the Dec 2 meeting.

Thank you  
 Lindsay MacDougall



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 Subject: SeaTac Part 150 Compatibility Study  
 CC: barry\_massoudi@cubicon.net

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Dear Sir:

I attended your presentation on Mercer Island last night. It appears this study, which can impact a large number of people, is being conducted in haste and without sufficient input and representation from the city. It will be impacted by the proposals of your committee.

The split east turn proposal, in my view, has a number of weaknesses:

- a.. Population that have not been exposed to this level of airport noise in the past will now be exposed;
  - b.. The planes will be making their turns at a lower altitude and therefore be noisier;
  - c.. The lower altitude turn, in a mountainous region, can impact the safety of the passengers and crew;
  - d.. The low altitude turn over a heavily populated urban area can impact the safety of the residents in case of a mishap;
  - e.. The noise level will adversely impact the children and schools on Mercer Island and the quality of our children's education;
  - f.. The lower altitude turns can interfere with airplanes taking off from Renton Municipal Airport, creating a crossroads in the area that increases the noise level combined from two airports and safety over a heavily populated urban area (Renton municipal airport already creates a great deal of noise over Mercer Island);
  - g.. The study focuses on averages vs. absolute impacts, thus significantly diluting the true noise impact on Mercer Island residents.
- With these issues, and many more, it appears that the committee must undertake the following actions:

- a.. Extend the time allotted for the study by at least 12 to 18 months;
  - b.. Enhance citizen representation on the committee in proportion to the urban population that will have the greatest direct impact;
  - c.. Focus on minimizing the noise level for all Washington State by more seriously exploring routes that will take the planes westward from Puget Sound and less heavily populated areas;
  - d.. Allow more input from the citizens of Mercer Island through holding more town meetings on this important subject.
- Thank you for your time. I am sure that your committee will place the best interests of individuals and citizens above politics on this sensitive impact issue.

Barry Massoudi

Resident of Mercer Island

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Dear Mr. West:

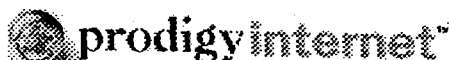
I have several comments to make about the proposed change in the No path from SeaTac airport. 1. The Citizen Committee was not an unbi committee and I think that their recommendations should be viewed w skepticism. I say this because the representative of Councilman Mc district, Dr. Rudolph, had an agenda from the beginning. He wanted diversion of flights away from his residence, Medina. He has been for that result for at least ten years and did not represent all of residents of the district. 2. I do not think enough attention has

to the fact that turns over Mercer Island will be made at a much lo altitude then they attain when flying further north. In the materi out I did not see any reference to altitude. 3. I do not think th consideration has been given to the proposal to fly over the Duwami followed by a westerly turn. This would solve the problem for the Eastside without diverting planes over someone else's neighborhood.

I do appreciate the staff members taking their evening to make the presentation on Mercer Island.

Duane E. Matthews  
 7817 SE 75th Place  
 Mercer Island, WA 98040-5501  
 206-232-0084

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**To:** seymour.r@portseattle.org rconrad@ci.mercer\_island.wa.us  
 bscairns@home.com MJWEST@prodigy.net  
**From:** Bennet McConaughy <Ben@sandlaw.com>  
**Subject:** Jet noise issues  
**CC:**

As a resident of Mercer Island, I am concerned that the "Citizen's Committee" assessing takeoff paths does not represent a broad spect of public input. Instead, the Eastside representative appears to have self interest to the detriment of other Eastside communities. The path will have an extremely detrimental effect on Mercer Island in particular, because of the low altitude (4,000-5,000 feet) at which will pass the Island. This effect will be considerably greater tha other Eastside areas, where the planes will cross at 8-10,000 feet. on the Citizen's Committee is addressing these issues, and they nee considered.

Bennet A. McConaughy  
 Sandler Ahern & McConaughy PLLC  
 > 1200 5th Avenue, Suite 1900  
 > Seattle, WA 98101-2647  
 (206) 346-1750

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01 December 1999

To: Port of Seattle

The purpose of this letter is to voice my opposition to the proposed new flight track which would bring more aircraft over Mercer Island.

I live towards the middle/south end of MI and we already have a substantial amount of aircraft noise:

Boeing in Renton frequently has departures and arrivals over the east side and center of MI.

The Renton public airport has large number of small aircraft that takeoff and land with routes over MI.

Sea-Tac airplanes (propeller) currently have a flight path above us heading east.

Sea-Tac jets taking off often fly up the center of MI heading north.

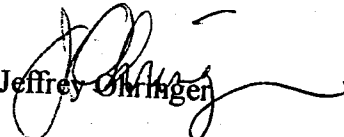
Ocasionaly a Sea-Tac jet will come from the east heading towards the airport to land.

Ocasionaly even a Boeing Field/Seattle jet passes by above our home.

I am very concerned about this new turn and more jets flying over MI. As you surely know, the engine noise from this fight track would be extremely significant. It's not "sharing" the noise. This additional noise would be stressful and intolerable to the residents in this area of MI.

I would also think that with all this air traffic crossing above safety would be an important issue.

What has been done to examine this area of concern in regards to safety?

  
Jeffrey Okring  
Mercer Island Resident

1 December 1999

Ron Seymour  
Port of Seattle

Dear Sir,

My wife and I strongly oppose any change to the east turn that will increase air traffic over Mercer Island. We do not feel that the Part 150 committee's mission was to study or make such recommendations on flight tracks. These actions are completely contrary to the guideline issued by Gina Marie Lindsey, Director of Aviation, Port of Seattle in her letter published in the Autumn 1998 issue of "Update" to the Part 150. ".....recommendations emerging from this study should not benefit one neighborhood or group to the detriment of others."

In addition there is one person, Dr. Rudolph, who was appointed by Rob McKenna to represent the entire Eastside community. In reality there are many communities on the Eastside that would be affected. affected by a flight track change. Dr. Rudolph lives under the present flight track in Medina and has been trying to shift the track away for a dozen years. He does not represent Mercer Island and other negatively effected communities.

At a meeting, held on August 18th, the port consultants reported that if an east turn scatter pattern were used, instead of the present turn, 100,000+ additional people would be negatively impacted. This was not an acceptable solution. It was better not to change it.

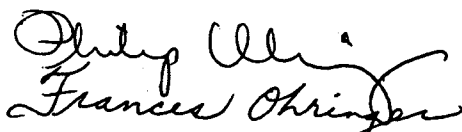
However, a well organized large group of Leschi residents wearing labels "indicating they wanted others to share their noise" did not accept that report as the final answer and essentially coerced the committee and the consultants to go back to the drawing board and "move those planes". With the encouragement of Dr. Rudolph the committee members became sympathetic their cause. As a result, the consultants asked to do another study.

The port consultants presented their latest report on November 17 at 6:00PM at SeaTac airport to a full house. The consultant tried to estimate the effect of splitting the east turn into two tracks. 55% of the aircraft(125 jets) would fly over mid-Mercer Island, the other 45% to fly near Medina. In addition, the planes flying over Mercer Island would have to stay below 6000 feet to avoid incoming traffic; the ones further north would stay below 9000 feet.

Since Mercer Island residents are already experiencing aircraft noise on the north, east and south sides of the island, this new path would be the finishing touch. The data presented estimated that the split turn would reduce noise in many communities, but would drastically increase noise on Mercer Island and Seward Park.. Mt. Baker, Newcastle, Newport Hills and Somerset would also be affected but to a lesser degree.

One really does not have to be a rocket scientist to figure out that communities under the proposed flight track would experience dramatic increase in noise because the airplanes would come over at a low altitude. If this plan is ever implemented it will have a dramatic impact on the lifestyle of Mercer Island residents as well as other negatively impacted communities.

We urge you to stop any further effort to split the existing flight track.. Thank you.

  
Philip & Frances Ohringer

5243 Forest Avenue  
Mercer Island, WA 98040



**From:** orth <orth@email.msn.com>  
**To:** mjwest@prodigy.net <mjwest@prodigy.net>  
**Date:** Wednesday, December 01, 1999 4:01 PM  
**Subject:** Re: Proposal to Modify North Flow East Turn Flight Track

---

Barnard Dunkelberg & Co.  
Attn Mr. Michael West  
1122 East Pike Street  
Seattle, Wa 98122

Re: Part 150 Study for Split East Turn

Dear Sir,

I attended the November 17th, 1999 SeaTac meeting of the Operations Subcommittee which is studying development of flight track alternatives. I was disturbed by numerous issues in evidence at this meeting and am writing to protest a couple of those that I perceive to be shortcomings in both process and philosophy. Since I am unable to attend the public open house on Dec.2. I am addressing this to your offices hoping to make my comments part of the public input and record.

#### 1. Noise Dispersal Issues

If the object is to let greater numbers of people "share" in our regional jet noise, then I submit that this objective is not achieved by reducing the total Db's for SOME of the population via dramatic and disproportionately increased Db's for one OTHER part of the region. This point is so patently, intuitively obvious that any data NOT supporting it is highly suspect. To achieve noise reduction AND noise sharing for EVERYone, there needs to be a dramatic increase in routings over Elliott Bay, as well as greater numbers of routings further north (gaining greater altitude and resulting in less noise for all) before commencing east or west turns to go south. If this presents problems with airline operating expense or with incoming flight patterns, then these issues will need to be properly addressed as component pieces of a more comprehensive solution than the band-aid fix being proposed. The proposed split track routing of some 65% of take-offs into lower, noisier turns over OTHER Seattle and Eastside neighborhoods than those presently affected does not result in noise "sharing" but instead pits one community against another.

#### 2. Committee Representation

Communities to be negatively affected by this proposal (Renton Highlands, Kenndale, Hazelwood, Newcastle, Newport Hills, Mercer Island, etc.) have NO representation on this committee. KC Distr.#6 does include these areas and the district IS nominally represented by Rob McKenna appointee Dr. R.

12/1/99

1862012

Rudolph. However, in the Nov.17 meeting, Dr. Rudolph made numerous statements betraying a clear bias in favor of the proposed split turn. Given the location of his private residence this is understandable, but given his obvious lack of balanced perspective should be sufficient cause for his removal from the committee. I am sending a copy of this request to Mr. McKenna.

Thank you,  
Hans O. Orth  
5261 W. Mercer Way  
Mercer Island, Wa 98040  
206-232-3139

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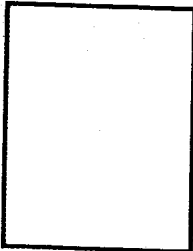
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To: mjwest@prodigy.net  
 From: "orth" <orth@email.msn.com>  
 Subject: Re Proposal to Modify North Flow East Turn FI  
 CC:

Barnard Dunkelberg & Co.  
 Attn Mr. Michael West  
 1122 East Pike Street  
 Seattle, Wa 98122

Re: Part 150 Study for Split East Turn



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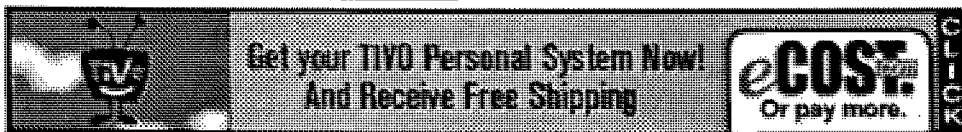
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Communities to be negatively affected by this proposal (Renton High

Kennydale, Hazelwood, Newcastle, Newport Hills, Mercer Island, etc. representation on this committee. KC Distr.#6 does include these a the district IS nominally represented by Rob McKenna appointee Dr. Rudolph. However, in the Nov.17 meeting, Dr. Rudolph made numerous statements betraying a clear bias in favor of the proposed split tu Given the location of his private residence this is understandable, given his ovious lack of balanced perpsective should be sufficient his removal from the committee. I am sending a copy of this reques McKenna.

Thank you,  
Hans O. Orth  
5261 W. Mercer Way  
Mercer Island, Wa 98040  
206-232-3139

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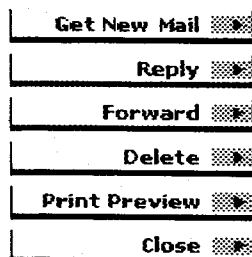
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To: mjwest@prodigy.net  
 From: David Patterson <davepatt@u.washington.edu>  
 Subject: FAR Part 150 Study  
 CC: davepatt@u.washington.edu



To: Barnard Dunkelberg and Company  
 c/o Mr Michael West

From: Dave and Liz Patterson  
 4907 E Mercer Way  
 Mercer Island, WA 98040

RE: Proposed split pattern of Seatac Air Traffic

The purpose of this letter is to express our strongest possible objection that the Citizen's Group is considering a split flight path with the southern route passing over Seward Park, Mercer Island and Newport Hills at an altitude of 3,000 to 5,000 feet. It is our contention that this option SHOULD NEVER EVEN BE CONSIDERED AS A RECOMMENDATION OF THE CITIZENS GROUP. We ask you to consider the following points:

1. The recommendation of a split path comes from a "citizen's group" that has no representation from the potentially affected communities. A supposed representative from Mercer Island lives in Medina and this individual is suspected of pushing this agenda to the benefit of his community and to the detriment of Mercer Island and surrounding communities. The split path proposal appeared suspiciously and suddenly and gave little opportunity for the newly affected communities to see and react to this plan. At best, this plan represents a community's attempt to alleviate partially their air traffic at the much more dire cost to the communities to the south.
2. The notion of eastern flight paths is a holdover from the energy crisis of the late 1970s. Rather than behaving in an honorable fashion and returning flight paths to the west, the powers-that-be are considering increased flight paths to the East that would adversely affect thousands of more regional citizens.
3. This cannot possibly pass and, consequently, feasibility studies will represent a significant waste of money. Does anyone really expect that a community with no say in the matter will accept over 100 flights per day flying overhead at 3,000 to 5,000 feet? How can this possibly pass without environmental studies? Again, this proposal should not even be included.

a recommendation to be considered.

4. Mercer Island already has it's share of airline traffic from Boeing fields, float planes, as well as Seatac traffic.

5. No reasonable interpretation of the data could suggest that t proposal will not affect communities in an adverse manner. My understanding is that a proposal with such properties was not to be entertained.

Again, this is a ridiculous, unfair option that should not be on included in January by the Citizen's Committee. The split path prop should be eliminated as an option immediately, in favor of less destructive, more reasonable alternatives.

Thank you

Dave and Liz Patterson  
4907 E Mercer Way  
Mercer Island, WA 98040

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**MARIA C. FOX**  
(206) 587-2700

LEGAL ASSISTANTS  
**HEATHER STROUP**  
(206) 587-2700  
**BEVERLEY THOMAS**  
(206) 382-2900  
**CHRISTINA SMITH**  
(206) 587-2700

December 1, 1999

FAX: (206) 587-0262

Sea-Tac Pac Part 150 Noise Compatability Study  
Citizen Advisory Committee  
c/o Ron Seymour  
Seattle Tacoma International Airport  
Noise Abatement Office  
P.O. Box 68727  
Seattle, WA 98168

Re: **Seattle Tacoma International Airport  
Part 150 Noise Compatability Study - PUBLIC COMMENT  
PLEASE PLACE IN THE RECORD**

Dear Committee Members:

Please be advised that I am a resident of Mercer Island, Washington, and request these remarks be made part of the public record as part of the Sea-Tac Part #150 Noise Compatability Study.

I am vehemently opposed to any change of the east turn procedure which would increase any more air traffic over Mercer Island at any time. I am opposed to any change in the east turn procedure for the following reasons which have been raised by others and I am adopting and incorporating:

- (1) The Split Turn analysis does not support the Policies of the FAR Part 150 Study which state:

*"The proposed Part 150 noise mitigation program will improve the overall noise environment, not shift noise from one residential community to another".*

The Split turn increased both the annual and the daily noise exposure. The Split turn is specifically aimed at shifting noise from one residential community to another.

*"Programs which benefit a community without adversely affecting another community will be given priority".*

The 150 Noise Compatability Study should include a full analysis of the maximum utilization of the Duwamish Corridor and West turn as recommended in the FAA Final Environment Assessment 3/27/90

What steps have been taken to begin more use of the Duwamish Corridor? Why has so little been done to utilize the Duwamish Corridor and when will this request and work actually be accomplished? These answers must be furnished prior to adoption of any recommendation.

*"Programs reducing the highest residential community noise levels without adversely affecting another community will be given priority".*

It is my understanding areas immediately north of the airport which now receive the highest community noise levels will be even more seriously impacted by close in low level turns.

- (2) The constitution of the committee is not adequately representative of the residential areas to which noise is shifted particularly in the East side. Dr. Rudolph does not represent anything but his own self interest regarding his own home and should be removed from the committee.
- (3) The study should include the impacts of other air traffic using Boeing Field and Renton airfields but fails to do so. The study must be modified to include these impacts.
- (4) The interpretations of the data are highly dependent on the location and density of locations selected for analysis. The analysis prepared to date is insufficient and flawed. The analysis does not adequately point out the devastating impacts of the proposed change upon Mercer Island.

Please add my name to any future mailing regarding the 150 Noise Compatability Study.

Thank you.

Sincerely,

  
Kevin A. Peck

KAP/ad



Port of Seattle  
Seattle, Washington

December 1, 1999

To Whom It May Concern:

We are writing to strongly oppose the proposed re-routing of North-bound air traffic from Sea-Tac Airport.

The change in flight pattern would dramatically affect the quality of life on Mercer Island. We purchased our home mid-Island specifically because it is reasonably quiet.

- Pertinent points :
1. Our property value would significantly diminish if the new air traffic pattern is implemented
  2. The planes would fly over all the schools on the Island, affecting instructional time and Student concentration.
  3. The Representative for Mercer Island, Dr. Rudolph, is biased and does not adequately represent Mercer Island.
  4. We strongly recommend that planes be routed west over Puget Sound.

Thank you for your consideration.

Sincerely,

*Gene Alan Phillips*

Gene Alan Phillips

*Edyth Phillips*

Edyth Phillips

4681 West Mercer Way  
Mercer Island, Washington 98040

(206) 232 - 9415

Gatis N. Roze  
Joanna Stratton Roze  
8206 Avalon Drive  
Mercer Island, WA 98040  
Phone: (206) 521-9775  
Fax: (206) 521-9866

December 8, 1999

Dear Mr. Michael West:

I wanted to write to you regarding the Port of Seattle proposal to send jets over Mercer Island. We for one already have to deal with all the Renton Airport planes flying very low directly over our home.

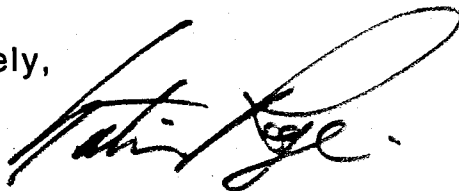
It has also been our experience that the stated "window of operating hours" has not been adhered to, hence we are at times jarred out of bed early in the morning or in some cases late at night.

It has also been our direct experience prior to moving to Mercer Island, that new plane flight paths significantly depreciate the value of homes beneath their paths.

Why send jets directly over the rooftops of one of the most expensive neighborhoods in the country? It's reasonable to expect that a conservative number, such as 10% depreciation in the value of Mercer Island property values, would result in approximately half a billion dollars lost by Island residents and businesses. Our actual experience elsewhere was closer to 20%.

Please take these facts into account.

Sincerely,



Gatis & Joanna & Grayson Roze

## Comments

Thank you for taking the time to comment on what you have seen and heard at tonight's open house. You may submit your comments now in one of the boxes marked "Comments", or you can mail them to:

Michael West  
1122 E. Pike St. #1286  
Seattle WA 98122

At any time.

You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net).

### Comments:

① This exact situation happened to us in Calif. They said our property values would ↓ 5-10%. It was in fact more like 20% when we sold. Why send planes over the most expensive real estate in Seattle. Go West.

The depreciation on Mercer Island alone will be at least 1/2 billion dollars.

② We heavily get Renton Airport traffic. They told no planes fly on 7am-10pm. That's just not true. We do get planes at 6am & at 11:30pm. With kids - it's just unbearable when they lose sleep.

### Optional:

Name:

Address (City, State, Zip):

Phone:

Fax:

E-mail:

THE ROZES  
8206 AVALON DRIVE  
MERCER ISLAND, WA 98040-5613

[gatusroze@AOh.com](mailto:gatusroze@AOh.com).

From Dec 8 Forum - City of Mercer Island / Port of Seattle

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**To:** MJWEST@prodigy.net seymour.r@portseattle.org  
**From:** GATISROZE@aol.com  
**Subject:** RE;MERCER ISLAND PROPOSED JET PATH.  
**CC:**

A couple comments:--1--We already get the plane traffic of the Rent over our house and on certain days it starts at 6 am and ends at mi With small children this is nothing less than hell.--2--The experts our property values would decrease no more than 5-10% when exactly happened to us out of state some 5 years ago. Our actual experience decrease of 20% as we sold into these circumstances.--3--Why would planes over some of the most expensive real estate in the state? Wh figure out a way to send them west over the sound, as it use to be.  
 -Gatis Roze.

Move this message to:

Sea-Tac International Airport Part 150 Study  
Public Open House  
Dec. 2<sup>nd</sup>, 1999

Comments

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Michael West  
1122 E. Pike St. #1286  
Seattle WA 98122

At any time.

You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net).

Comments:

Please do not split the East Track.  
It makes far more sense to send the jets  
over Elliot Bay rather than the EWT side

Optional:

Name: James Jayre  
Address (City, State, Zip): Mercer Island, WA, 98040-5706  
Phone: 206 969-8870  
Fax:  
E-mail: [glisten@home.com](mailto:glisten@home.com)

Sea-Tac International Airport Part 150 Study  
Public Open House  
Dec. 2nd, 1999

Comments

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Michael West  
1122 E. Pike St. #1286  
Seattle WA 98122

At any time.

You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net).

Comments:

I would like to express an opinion  
against the Split Track to route more  
airplanes over the South end of Mercer Island  
& Somerset etc. The noise of single events  
& increased noise exposure will be a negative  
change for me and my family. An  
school of 600+ students & faculty would  
be negatively affected by  
increased air traffic.

Name: Sabra Sayre

Address (City, State, Zip):

Phone:

Fax:

E-mail:

8501 SE 76th Pl  
Mercer Is WA

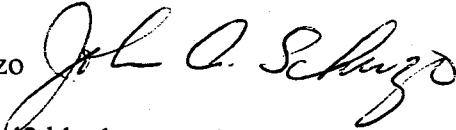
206-230-9207

SB sayre@home.com

November 30, 1999

Port of Seattle, Part 150 Study Seatac Airport.

My name is John A. Scherzo



I have lived 20 years at the 42 block, west side, of Mercer Island, which is between the current and proposed split track east turn.

I attended the last November committee meeting at Seatac. It appears to me that Dr. Rudolph is not a disinterested party and is not representing my interest in this discussion. The proposed spit east turn split track would reduce the over-flights at his house by 55% and would increase the over flight by 55% at my house and increase the noise to a much greater level due to the lower level of flights going east over the center of Mercer Island and then turning south. The split east turn will make the noise level of South Seattle and Seward Park areas even worse than MI as the turn will be 5 miles out and at 4000 feet instead of 8 miles out and at under 9000 feet.

The stated mission of a Part 150 study is to make a recommendation, which realistically can be expected to reduce the number of people affected by aircraft noise.

This recommendation will shift and increase the noise to a greater number of people. This study is only dealing with takeoffs from Seatac. What this area needs is a study of all the airports (landings and takeoffs) and airport manufacturing facilities.

From my house the landings and takeoffs of Seatac, Boeing Field, and Renton Airport and the burn-in of engines at the Boeing facility currently affect me. The addition of this split east turn would worsen other MI residents and mine. These flights are especially noisy when the weather is overcast and before 7:00 AM and after 10:00 PM.

To limit a noise study to takeoffs from Seatac is not appropriate for this area. Shifting this noise to another area without considering the existing noise is not "fair or sharing" as Dr Rudolph likes to say.

There is a solution that would reduce the noise level for all King County residents. The Duwamish corridor and Elliot Bay is the answer for Seatac takeoffs and the committee seems to agree but this would require working with other jurisdictions. Dr. Rudolph should be instructed to follow the mandate of Part 150, to make a recommendation, which realistically can be expected to reduce the number of people affected by airplane noise and not just his noise.

I ask that you request a total area noise study before any changes are made.

Thank you.

Sea-Tac International Airport Part 150 Study  
Public Open House  
Dec. 2<sup>nd</sup>, 1999

Comments

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Michael West  
1122 E. Pike St. #1286  
Seattle WA 98122

At any time.

You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net).

Comments:

FOR THE PORT OF SEATTLE TO REQUEST A STUDY ON NOISE  
WITHOUT CONSIDERING THE OTHER AREA AIRPORTS IS A  
WASTE OF TIME & MONEY AND WILL ONLY LEAD TO A  
FLAWY CONCLUSION TO THE AREA AIRPORTS.

Being field closely effects every town and the proposed  
NORTH TIAN SPLIT TRACK will aggravate THIS SITUATION EVEN  
further. along with other communities.

OPEN your eyes (ears) and look beyond your nose AS TO  
HOW THE area is affected by noise.

Optional:

Name: — JOHN A. SCHERZO  
Address (City, State, Zip): Q HALLY LANE  
Phone: MERCER ISLAND WA 98040  
Fax: 206-230-0181  
E-mail: SCHERZOCA@MCI.COM



Sea-Tac International Airport Part 150 Study  
Public Open House  
Dec. 2nd, 1999

Comments

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Michael West  
1122 E. Pike St. #1286  
Seattle WA 98122

At any time.

You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net).

Comments:

The representative for District 6 is in favor of pushing the larger portion of the noise to other parts of District 6 - He lives in the area to be benefited. His vote should not be considered, as he is not disinterested and has a vested interest.

I currently have the noise for the current NORTH WEST TURN and the revised turn will increase my current noise level and increase that noise due to lower flying planes.

Optional:

Name:

Address (City, State, Zip):

Phone:

Fax:

E-mail:

I currently have Boeing <sup>1/2</sup> Renta. <sup>1/2</sup> from Mt. Rainier business -  
which are NOT heard by the District Rep.

TOM A. SCHWARTZ  
9444 LANE  
MERIDEN ISLAND WA 98042  
206-236-2946  
206-230-0181  
[Schwartz009@MSN.com](mailto:Schwartz009@MSN.com)

Sea-Tac International Airport Part 150 Study  
Public Open House  
Dec. 2<sup>nd</sup>, 1999

Comments

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Michael West  
1122 E. Pike St. #1286  
Seattle WA 98122

At any time.

You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net).

Comments:

If I understand the facts properly - Phases using "gorator"  
FMS on the NORTH split. right turn will go higher  
and further NORTH the reducing the noise level of  
Phases using the southern right turn will go lower  
and ~~create~~ <sup>create</sup> more noise. The middle of both ends of  
Mercer Island is already affected by low flying planes  
from Boeing Renton Airports in addition to the  
engine burn-ins for Boeing mfg. - we need a  
complete area study.

Optional:

Name: JOHN SCHWARZO  
Address (City, State, Zip): 9 Holly Lane  
Mercer Island WA 98040  
Phone: 206-236-2346  
Fax: 206-230-0181  
E-mail: [schwarzop@msn.com](mailto:schwarzop@msn.com)



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To: mjwest@prodigy.net  
 From: Jenny and Gregg Selby <selbygang@earthlink.net>  
 Subject: SeaTac Part 150 Noise Compatibility Study  
 CC: rconrad@ci.mercer-island.wa.us seymour.r@portseattle.org  
 rob.mckenna@metrokc.gov Paula\_Butterfield@misd.wednet.edu  
 danielpaull@home.com

To: SeaTac Part 150 Noise Compatibility Study  
 Citizens Advisory Committee; Operations Sub-committee

Dear Committee Members:

According to the SeaTac Part 150 Noise Compatibility Study, the pro North Flow, East Turning split track flight path would move aircraft a low altitude over every school building located on Mercer Island. student population of the entire Mercer Island School District and three Mercer Island-based private schools would be severely impacted the split flight track. At the Mercer Island forum on Wednesday, December 8, the Part 150 Study consultants revealed that the split flight path would bring 20-30 aircraft PER HOUR over Mercer Island, its schools, during peak hours. According to the Part 150 Study, Mercer Island schools would experience speech interfering noise for as much as 10 minutes a day. This would result in the loss of up to 30 hours of instruction per class during the course of a regular school year. The effect of noise from low-flying aircraft on learning in Mercer Island schools would be significant. A change in the flight path would have an extremely negative impact on every teacher's ability to maintain an effective classroom environment and would impair the learning ability of all children in Mercer Island schools. The split track proposal places the education of Mercer Island's children at risk.

Based upon the above-mentioned and numerous additional negative impacts to the Mercer Island community, I am strongly opposed to an adoption of the split track procedure.

Thank you for the opportunity to provide input on this matter.

Sincerely,

Jenny Selby

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Janet Stafford <JStafford@mgnco.com>  
Part 150 study & movement of aircraft over Me

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Gentlemen,

Although we were unable to attend the meeting last night at MIHS, w  
you to know that our family is greatly concerned about the proposal  
the airplane flight path over Mercer Island. We understand that th  
the study was to reduce aircraft noise and not move it from one com  
another. We do not understand why the path cannot be over Puget So  
our region is blessed with an area where no one lives.

We would ask that you reevaluate your study results. We are strong  
opposed to a flight path which would result in increased traffic ov  
Island.

Sincerely,

Janet H. Stafford  
Jon W. Stafford

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## Comments

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Michael West  
1122 E. Pike St #1286  
Seattle WA 98122

At any time.

You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net)

### Comments:

**I accept the concept of equalizing the burden of 21<sup>st</sup> Century air traffic fallout, but in the proposed Split East Turn flight track (Track III-18B) EQUAL THINGS ARE NOT EQUAL.**

**If the proposed turn over Mercer Island were to be made at the same elevation as that over Medina, I could sympathize, but 3,000' is not the same as nearly 6,000'.**

**Until the plan specifies such equality, I oppose the proposed alternative.**

Optional:

Name:

Address (City, State, Zip):

Phone:

Fax:

E-mail:



Al Stenson  
89<sup>th</sup> Ave SE, Mercer Island, WA 98040  
(206) 232-4530

[al\\_stenson@msn.com](mailto:al_stenson@msn.com)

*From Dec 8 Forum - City of Mercer Island / Port of Seattle*

cc: Sea-Tac Director of Aviation, Port of Seattle Commissioners

Seattle-Tacoma International Airport  
Federal Aviation Regulation (FAR) Part 150 Study

Thank you for taking the time to comment on this FAR Part 150 Study. You may submit your comments to the address below:

Barnard Dunkelberg and Company  
c/o Mr. Michael West  
1122 E. Pike Street, #1286  
Seattle, Washington 98122

Comments will be accepted at this address through the end of the Study. You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net).

Comments: I wish to go on record in opposing any change in air travel affecting Mercer Island! Putting neighborhoods against neighborhoods as a solution is unacceptable. If the flight pattern was originally West and was changed to accommodate the airlines at that time, should now be put back on track. If its true that the FAA is beholden to the airlines and airplane companies (and that seems apparent) they also should get back on track and serve the citizens of this

Optional:

Name:

Address (City, State, Zip):

Phone: 206-232-2827

Fax:

Mrs. Barbara J. Joutila

7847 SE 40th

Mercer Island, WA. 98040-3514

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Mr Micheal West  
 1122 E. Pike St #1286  
 Seattle, WA 98122

Mr. West,

I represent a household with two children on Mercer Island. I am submitting a succinct recommendation for future commercial flight traffic patt from SEATAC. This message is a direct result of tonight's (Dec 8) Forum the City of Mercer Island and the Port of Seattle.

Recommendation Part A) Consolidate any North and East flight depart from SEATAC through a strict FMS departure envelope which maximizes altitude gain over Lake Washington prior to a single Eastward turn. Attempt to ensure ALL northbound aircraft departures are made via this rout This FMS departure WOULD NOT include any "fanning or splits." Design the FMS departure so the eastbound turn occurs at no less than 7,000 ft agl.

Recommendation Part B) Establish a strict FMS northbound departure through the "Duwamish corridor" and Elliot Bay which allows for maximal altitude gain via a climbing circling turn over open water prior to a turn South directly overhead SEATAC. This would be similar to the San Jose California northern departur shape. Establish a PHASE IN plan to eventually shift ALL northbound depart to this northwest FMS departure - PHASING OUT the eastbound turn departure AND the "mountain and (forgot the name)" turnpoints.

I feel this recommendation would directly benefit all the residents King County and have the best overall environmental impact on Puget Soun

I DO NOT support a split north / eastbound departure flight path or  
LONG TERM north / eastbound flight paths - we should be aggressive  
planning a single northern / overwater westward circling departure.

Sincerely,

Alan Trimble  
2264 71st Ave SE  
Mercer Island

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To: seymour.r@portseattle.org mjwest@prodigy.net  
 From: Nick Vedder <vedder@home.com>  
 Subject: further corrections to Summary of Flight Traf  
 CC: phd@airportnetwork.com  
 Attachment: Summary\_Corrections-Heltzel.txt ( [view it](#) )

Dear Mr. Seymor and Mr. West,

Tom Heltzel sent me a copy of some suggested corrections that he ha to you regarding the "Summary of Flight Traffic Alternatives," dated 11/29/99 (his text attached). I would first like to strongly his suggestions. I certainly hope that you do incorporate them int version of this important document.

In particular, the Location/Site data in the tables on pp. 16-17 se been widely misinterpreted by many members of the CAC and by some o public. As you know, in some cases, members of the Committee have to sum these individual values to "calculate" net changes, which cannot be done, given that only 1/4 of the "locations" lie under the proposed new path, whereas 3/4 of the "locations" lie under the current path. I spent some time with Mr. Dunholter at the last ope discussing the fallacy of such calculations, which Mr. Dunholter co understand that this discrepancy logically exists due to the histor emphasis on sites beneath the current path, but nevertheless, even scanning the numbers, one gets an erroneous impression due to this statistical "sampling bias." I therefore feel that it is imperative that a disclaimer be made at the bottom of this page sim what Tom Heltzel suggested:

"The site/location data represents a set of arbitrary/discreet poin While this data is useful in looking at relative changes at a given point, it can not be used to project impacts for general population population impact data is found elsewhere in this report."

I would also suggest that you clarify by adding, "Due to historical reasons, more locations are modeled beneath current flight paths th proposed flight paths."

I would also suggest further clarification on p. 10 of the summary. understand that many of these comments are open to interpretation, it is very important to refer to population numbers in addition to percentages when discussing population impacts, which this page att summarize and compare. For example:

In the DNL summary row it should state, "Decreases population withi

DNL by 2,390 (2%)" and "Increases population within 55 DNL by 17,720 (8%)"

In the Time Above summary row it should state under "Reduced Impact": "Reduces population exposed to noise levels that could affect speech more than 30 minutes per day by 9% and more than 60 m day by 13% (total 8,200 people)" [a net total of 8,200 would experience some improvement, not 8,200+5,300, as some have suggested since the group are included in the >30 number] and under "Increased Impact": "Increases population exposed to noise levels that could affect speech more than 10 minutes per day by 23% (total 47,600 people)."

Also, the 11/12/99 summary correctly stated that the split east tur "Would likely produce community reaction due to increased populatio exposed to TA 65." This is a very valid and important conclusion a should be included rather than dropped as was done in the 11/29/99 The 11/29/99 "comment" is misleading as there would be \*SIGNIFICANTLY\* more population exposed to TA 65, in fact 6 times a more would be hurt as would be partially helped. I would strongly that you either include both statements, or modify the statement to the net population impact.

Finally, somewhere in the summary (perhaps at the beginning) it sho noted that these data do not include the existing impact of aircraft originating from Renton Airport, Boeing Field, or SeaTac propellor For the north flow analysis, much of this existing noise impacts ar beneath the proposed new tract of the split east path more than are the current path.

Thank you both very much for tremendous efforts in this difficult p Your patience and understanding are sincerely appreciated.

Sincerely,

Nick Vedder

---

Nicholas B. Vedder  
[vedder@home.com](mailto:vedder@home.com)

---

Move this message to:

From: Tom Heltzel (12/10/99) To: seymour.r Corrections to Summary of Flight Traffic Alternatives, dated 11/29/99 Ron, Subject: Corrections to Summary of Flight Traffic Alternatives, dated 11/29/99 I have reviewed the subject document, and the detailed document of 11/3/99 from which it was derived. There are several inaccuracies, inconsistencies and ambiguities that should be corrected in your next update of this summary. These are outlined below: 1. The 11/3/99 document states, on page III-2, that about 55% of the east turn traffic follows SUMA, and 45% follows Mountain. In discussions with Mr. Dunholter, I learned that the model was run using a 50%/50% split. Apparently, this represents the "annual average" traffic, and the summer traffic becomes about 55%/45% as stated. Since the "north flow days" occur primarily in the summer, the "north flow day" data published understates the noise impact for the SUMA turn, and overstates the noise implications for the mountain turn. The use of this data should be clarified, or the model re-run to reflect the actual conditions. 2. The study data uses current aircraft-type fleet mix and traffic volumes to develop noise profiles. This will change significantly in the 2003, 2005, 2007 time frame, which coincides with the potential operation of the split turn alternative. The phase-out of F-28 and MD-80 aircraft will significantly reduce the noise generated on the Mountain turn. As a result, the current data overstates the noise implications for the Mountain turn in the time frame following operation of this proposal. The model should be re-run with the appropriate future conditions reflected, and clarification of this point should be included. 3. The location/site data on page 16 and 17 of the summary have been widely misunderstood and misinterpreted. A disclaimer on their use should be included on each of these pages. To wit: "The site/location data represents a set of arbitrary/discreet points. While this data is useful in looking at relative changes at a given point, it can not be used to project impacts for general populations. General population impact data is found elsewhere in this report." 4. The "potential sleep awakening" data does not include the 75-85 SEL "windows open" case. This case is very important in the Seattle area, as north flow days typically occur in the summer or during nice weather when, in our "non-air conditioning" climate, people typically sleep with windows open. The 75-85 SEL case with windows open provides 60 SEL (dB) at bedside, and 6% of such people affected would potentially awaken. The 75 SEL profile covers a large population, particularly in the split east turn scenario. Not including this data greatly understates the sleep awakening impact of the split east turn. This data should be included in the report and summary. 5. The text comments on page 10 of the summary are erroneous, ambiguous, and/or incomplete: The Comment for Time Above/Speech Interference (split track) should read "Alternative spreads the operations so that there are fewer people with higher levels of time above (8,200 people) on north flow days, but more people with lower levels of time above (47,600 people.) In addition, a consistent methodology and criteria should be used to indicate those "Areas" which have Reduced or Increase impacts, or this row should be dropped. As it is currently stated, areas like Clyde Hill, which are not a "location" are included, and highly impacted areas like Seward park are excluded. It would be less misleading to not include this row, and/or alternatively include tables on percentage change by location for each of the measures (time above, highly annoyed, and speech interference). Such tables were included in my report to the study committee dated 11/30/99 and delivered at the 12/1/99 CAC/TAC meeting. For your convenience, I have attached an electronic copy of this report. Thank you for including these clarifications and corrections in your next summary report. Tom Heltzel

Sea-Tac International Airport Part 150 Study  
Public Open House  
Dec. 2nd, 1999

Comments

Thank you for taking the time to comment on what you have seen and heard at tonight's open house. You may submit your comments now in one of the boxes marked "Comments", or you can mail them to:

Michael West  
1122 E. Pike St. #1286  
Seattle WA 98122

At any time.

You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net).

Comments:

Based upon the data presented in flight track alternatives summary, it seems clear that the split track will tremendously increase the population exposed to increased noise with only partial relief for those currently affected - e.g. for DMC - 2000 are really helped, but nearly 20,000 are hurt. Similar for +. Yet there in favor of the split track are pointing to a flawed analysis of one committee member where individual points are summed with only 4 included on one track + 17 included on the other! This can't be done!

Optional:

Name:

Address (City, State, Zip):

Phone:

Fax:

E-mail:

Nick Vedder

7500 SR 7155 St.

Mercer FJ, WA 98040

vedder@home.com

Sea-Tac International Airport Part 150 Study  
Public Open House  
Dec. 2<sup>nd</sup>, 1999

Comments

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Michael West  
1122 E. Pike St. #1286  
Seattle WA 98122

At any time.

You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net).

Comments:

Shifting noise to some communities does not provide noise relief for the region. Only noisy traffic to true noise abatement corridors (Duwamish, etc) can help. Please push this as much as you can.

Optional:

Name: Nick Vedder  
Address (City, State, Zip): 7580 5th 21st St.  
Phone:  
Fax: Mercer St WA 98040  
E-mail: vedder@home.com

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To: pbooth@home.com mjwest@prodigy.net  
 From: "Wensman, Rep. Mike" <wensman\_mi@leg.wa.gov>  
 Subject: RE: Part 150 Split north flight path  
 CC: Tom.Dempsey@metrokc.gov stravis999@aol.com roy@semaph  
 nancymatt@juno.com linda@unitype.com joannes@johnlscott.co  
 horn\_ji@leg.wa.gov ballasio\_id@leg.wa.gov gary@unitype.com  
 frankc@johnlscott.com lizbu@email.msn.com

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Well said Paul &amp; Melinda

Mike

-----Original Message-----

From: Paul Booth [<mailto:pbooth@home.com>]  
 Sent: Thursday, December 09, 1999 12:45 AM  
 To: Michael West  
 Cc: Tom Dempsey; Steve Suzanne Travis; Roy Simperman; Wensman, Rep.  
 Matt & Nancy Gordon; Linda Brandt Rosen; Joanne Stratos; Horn, Sen.  
 Ballasiotes, Rep. Ida; Gary Rosen; Frank Ceteznik; Elizabeth C. But  
 Subject: Part 150 Split north flight path

From Paul &amp; Melinda Booth, Mercer Island residents ---

We attended the public information meeting at Mercer Island High Sc  
 evening from 7:00 till 9:35.

We have read all the information available at the meeting and heard  
 questions and answers given.

We feel compelled to register our opinion on this matter.

The Citizen's Advisory Committee CAC does not fairly represent the  
 communities impacted by the flight plan proposals.  
 Mercer Island, Bellevue, Mount Baker, Issaquah, and Newcastle are n  
 absent. The only current representation is from communities which a  
 currently adversely effected by the airport noise. Their goal is t  
 their own noise to other communities. This bias must be made publi  
 opinions of all impacted communities sought and registered before a  
 recommendations can be issued. Even though Rob McKenna, King Co.  
 Councilman, has tried to remedy this with new committee appointmen  
 Bellevue and Issaquah, it is too late for these two new voices out  
 to have any real impact before January 19th when a recommendation  
 submitted by the CAC.

Despite the Consultant's reassurance that the CAC is not the only v  
 listened to, we find it disingenuous to call this a Citizen's commi  
 it is really a special interest group.

The lack of any proposals to go west or north shows the lack of consideration of all possible options. The Duwamish Corridor could alleviate the current east turn noise without shifting it to & severe impacting other residential communities.

We feel the Port of Seattle Commission, the Consultants, Bernard D & Co., & the Citizen's Advisory Committee have all failed to honor guiding policies to improve overall noise environment and not shift from one residential community to another. The split east turn proposal violates both of these policies and should not be an option to be considered under any circumstances.

Also by violating their own guiding policies they have deceived the communities affected by the split east turn without providing them warning or representation on the Citizen's Advisory Community. While it may not have been intentional the results are inherently unfair and without representation of the entire community.

The 1987 study of scatter type flight plans such as the 'Split East' showed this to be a flawed policy impacting far more people than other plans.

The Consultant's Part 150 noise impact data clearly discredits the Turn plan showing significant increases in the number of residents harmed and an increase in overall community air noise.

Our final major concern underlies all of the above. The CAC was selected by the Consultants. The Consultants were hired by the Port Commission. The Port Commission relies on its clients, the airlines for its income. The airlines save money on fuel with the east turn & especially the turn at the expense of the citizen's quality of life.

To meet the guiding policies of reducing noise for all Puget Sound residents, we would have all northbound flights directed up the Duwamish Corridor to Elliot Bay, north over Puget Sound till five thousand feet then turn east. This uses a little more fuel and significantly improves quality of life for all residents. We would be glad to pay a few more bucks for plane tickets in exchange for being able to live free of pollution.

Thank you for considering our views,

Paul & Melinda Booth

Move this message to:

Seattle-Tacoma International Airport  
Federal Aviation Regulation (FAR) Part 150 Study

Thank you for taking the time to comment on this FAR Part 150 Study. You may submit your comments to the address below:

Barnard Dunkelberg and Company  
c/o Mr. Michael West  
1122 E. Pike Street, #1286  
Seattle, Washington 98122

Comments will be accepted at this address through the end of the Study. You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net).

**Comments:** My husband and I learned about this issue a few days ago by word of mouth at the grocery store and I attended the meeting at Mercer Island High School on Dec. 9. My first comment is that the "split East turn" seems like a sneak attack on Mercer Island residents. It makes no sense. It does not solve the overall problem. It only shifts an enhancement of the noise problem to Mercer Island residents, et. al. A lower altitude turn (3000 feet) makes more noise than the status quo pattern. Total noise from SeaTac traffic will go up! Mercer Island residents will suffer through up to 110 flights per day turning East at ~3000 feet of elevation instead of those <sup>same</sup> flights currently turning East at ~6,000 feet elevation.

**Optional:**

Name:

Address (City, State, Zip):

Phone:

Fax:

My (second) comment is to deplore the lack of representation Mercer Island residents have on the Citizen Advisory Committee.

In conclusion, my husband and I are voicing our strong opposition to the idea of a split track proposal to modify the existing east turn flight track procedure.

Sincerely,  
Renee White  
8121 SE 79<sup>th</sup> St.  
Mercer Island  
WA 98040



December 2, 1999

Re: Proposed change in flight paths leaving SeaTac Airport

To Whom It May Concern:

Thank you for this opportunity to comment on the proposed re-routing of flights leaving SeaTac over Mercer Island. I am very concerned about this proposal.

I have lived on Mercer Island for nine years. The island has many attractions, not the least of which are its peaceful setting, almost semi-rural in nature, despite the proximity to downtown Seattle. We purchased our home on the island at a price determined by many factors, including this peaceful setting. We have paid taxes on the property based on that value. In a sense we have paid higher taxes based on the absence of things that would detract from the value of our home. Things like the overhead noise caused by aircraft overhead.

I imagine that there are property values in other locales that have been determined in part by the presence of aircraft noise or other environmental inconveniences. The owners of those properties paid purchase prices and taxes based on those factors; they chose to live in those areas. I believe that those folks bought property with a kind of easement, if that is the right term: they bought the property with the flight paths in place, criss-crossing their environment—the visual environment and the audible environment.


With these considerations in mind please consider that to change the flight paths amounts to the government taking something of mine away from me without due process, in the name of "fair redistribution". My peaceful setting, my peace of mind, my established home and family setting will be adversely impacted.

Who will redistribute the value lost by the parties losing their property values, and most importantly, their peaceful environment?

Please do not let this change take place. Please do not take from me what I have fairly acquired to assuage those who seek only to increase what they have at my expense.

Thank you very much for your thoughtful deliberations on this matter.

Sincerely,

  
John D. Wynn, M.D.  
7951 Island Crest Way  
Mercer Island, WA 98040-5761

To whom it may concern,

Dec. 2, 1999

I am sorry I cannot attend today's meeting, with others, from Mercer Island.

I wanted to express my concern for the possibility of air planes in the near future,

flying closely over Mercer Island. I am

opposed to having airplanes flying closely over Mercer Island. The noise and exhaust fumes would extremely alter the environment

and nature on the island. I have young

children. I do not want the negative changes

that will occur if airplanes are regularly

flying closely over Mercer Island.

Sincerely, Jody Ziskind

I am writing about some proposed changes to the SEA-TAC Flight pattern - What?!! I am a homeowner, have lived in SE Seattle Seward Park for 20 years. I understand someone is considering diverting south bound air traffic exclusively over my home. Why haven't I been notified? Has anyone considered spreading this noise through out the region? Has anyone considered all the noise we already get from Renton and King County Airports? Has anyone considered how low - (therefore noisier) - these flights over my home will be? Why aren't these flights turning east over NE Seattle - thousands of feet higher? Is government "poised" to screw lower income SE Seattle - first with noisy, dangerous surface rail, and now with noisy air traffic?

I would like some answer, including just who will make this decision for me. Gordy Comer

5116 South Pearl Street  
Seattle, Washington 98118

Sea-Tac International Airport Part 150 Study  
Public Open House  
Dec. 2<sup>nd</sup>, 1999

Comments

Thank you for taking the time to comment on what you have seen and heard at tonight's open house. You may submit your comments now in one of the boxes marked "Comments", or you can mail them to:

Michael West  
1122 E. Pike St. #1286  
Seattle WA 98122

At any time.

You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net).

Comments: I am very opposed to the split east turn; while I believe strongly that the currently impacted by the east turn should have relief, and while I support fairness, I do not think the split east turn is a good solution.

I live in Seward Park & were impacted by Renton Airport & Boeing field, by helicopter noise &

Optional:

Name: Colleen Laing  
Address (City, State, Zip): 5207 So. Fanna St  
Phone: Seattle 98118  
Fax:  
E-mail: (206) 723-7713  
CBlain@02.net

testing of engines. These other airport impacts  
● most be considered in making route decisions.

The time of year that planes take off northbound is predominantly summer. That's the time we're outside - you can't mitigate outside.

Seward Park is home to a nesting pair of bald eagles - do they get to come to the hearings?

● Many residents from around the city use Seward park - airplane noise impacts more than just residents.

The Split East turn has planes turning @ lower altitudes. The options should only be to look @ less noisy alternatives, not more noisy ones.

● DNL Doesn't reflect the amount of noise at my house! 10 minutes of 65 DNL means noise every 60 to 90 seconds! Do you live in a neighborhood with this kind of noise? would you?

Go to March 1st... 11:00 - 1:00 PM... The... sound it

Sarah C. Driggs  
5403 S. Alaska  
Seattle, WA 98118  
(206) 725-3856  
driggsdiers@seanet.com

December 2~~8~~, 1999

Michael West  
1122 E. Pike St.  
Seattle, WA 98122

Dear Mr. West:

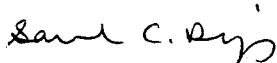
I am writing to express my strong objection to the proposed plan to split the paths jets take out of Sea-Tac Airport, sending southbound airplanes over Seward Park.

Seward Park is a unique and special place in Seattle. It is home to birds and wildlife rarely seen in the city, including two nesting pairs of Bald Eagles, owls, pileated woodpeckers, beavers and opossums. The park has a mile-long wooded trail and a two-and-a-half mile lakeside path that many people enjoy as a quiet refuge in the city. The park also is a major regional gathering area, where hundreds of people congregate for picnics, outdoor concerts, road races, nature walks and other events. At a time when Seattle is experiencing congestion, loss of wildlife habitat and wildlife, human stress, increased air pollution and other problems associated with growth, it is essential that the city retain its quiet natural spaces and its outdoor community gathering places. Regular airplane flights over the park would devastate Seward Park's natural serenity and greatly disturb the animal and human activities that take place there.

We have learned from our experience with endangered salmon that we simply cannot act with disregard to such issues without eventually suffering severe consequences.

I strongly urge you to reject any proposals that would result in increased air traffic over or near Seward Park. I would like to be kept informed about your decisions on this matter.

Sincerely,



Sarah C. Driggs

November 23, 1999

Barnard Dunkelberg & Company  
C/o Mr. Michael West  
1122 East Pike Street  
Seattle, WA 98122

Dear Mr. West,

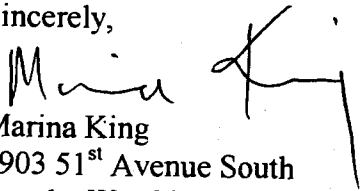
I am very distressed with the proposal to change the northbound departure pathway of Seatac Airport traffic, increasing low-flight traffic over Seward Park. I am a resident of the Seward Park neighborhood and a heavy user of the park itself. I do not think that your company's proposal is a "solution" for anybody.

It doesn't seem to be bringing a lot of relief to the Leschi-Madrona neighborhoods, which have been plagued by the noise of north flow departures, to date. It will be lowering the quality of life in Seward Park, which already experiences low-flights and noise from Renton and Boeing airfields.

Did you take a walk in Seward Park, prior to making your decision? The park is a jewel in the city's park system, as it contains some of the few old-growth trees left in the entire metropolitan area. Walking along its woods pathways or along the lakefront is my getaway from the urban experience all around me. Your company's recommendation, if carried out, will destroy the tranquility of that large and significant park. Poor decision, guys.

I recommend going back to the drawing board and looking at the whole metropolitan region. What is the problem with routing northbound traffic up the Duwamish industrial area, or out over Elliot Bay? How about sending them farther north and having them turn somewhere between Seattle and Everett? Lets get some thinking outside of the box. The current proposal reeks of box to me.

Sincerely,

  
Marina King  
4903 51<sup>st</sup> Avenue South  
Seattle, WA 98118

Sea-Tac International Airport Part 150 Study  
Public Open House  
Dec. 2nd, 1999

Comments

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Michael West  
1122 E. Pike St. #1286  
Seattle WA 98122

At any time.

You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net).

Comments:

AS I PERCEIVE IT. ←

SEL - DATA IS MISLEADING - NOT REFLECTING NOISE AT MY HOUSE:  
NOISE MEASURES PLANES NOT HUMAN AUDITION -  
WHY BOTHER EVEN SHARING THE INFO W/ US HUMANS?

THIS STUDY, almost exclusively, MEASURES DEPARTURE NOISE  
AT ONE AIRPORT (SEA/TAC) WHEN WE ARE IMPACTED BY  
RENTON, BOEING, AND THE MANUFACTURER'S ENGINES.

SEWARD PARK AREA HAS CHILDREN (LOW INCOME etc) TRYING  
TO LEARN, OTHER CHILDREN W/ ALLERGIES, THE PARK, PROPER  
HAS ENDANGERED WILDLIFE - WE NEED TO SEE AN 'EIS'

Optional: CONDUCTED WHICH CONSIDERS OUR CHILDREN'S  
HEALTH, HEARING, AND THE BALD EAGLES'  
Address (City, State, Zip): HABITAT.

Name:

Address (City, State, Zip):

Phone:

Fax:

E-mail:

ERNEST B. JOHNSON II  
5225 SOUTH PEARL ST.  
206-725-5754  
[ejohnson@etc.edu](mailto:ejohnson@etc.edu)



Sea-Tac International Airport Part 150 Study  
Public Open House  
Dec. 2<sup>nd</sup>, 1999

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Michael West  
1122 E. Pike St. #1286  
Seattle WA 98122

At any time.

You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net).

Comments:

I really appreciated the time the consultant spent to explain to us the study. I have a much better understanding of the issues. As a resident of SEWARD my home is facing east on a hill + I would be directly in the flight path (new split) As I understand it, at the turn the airplanes would be on the average 2000 feet lower than at the turn near heshi. The impact on the community would be devastating - nothing compared to heshi, much louder and disturbing. It would destroy the park, the only old growth forest in an urban environment with bald eagles.

Optional:

Name:

Address (City, State, Zip):

Phone:

Fax:

E-mail:

Erhard Letziny  
4820-53rd Ave. S.  
Seattle, WA 98108      [letziny@seanet.com](mailto:letziny@seanet.com)

Sea-Tac International Airport Part 150 Study  
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Comments

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Michael West  
1122 E. Pike St. #1286  
Seattle WA 98122

At any time.

You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net).

Comments:

Being a resident of Seward Park who will be greatly affected by the split East turn, the park of Seward Park which is highly utilized during the summer months ~~it~~ will be so highly impacted this proposal does not make any sense <sup>we need</sup> to protect our precious ~~annually~~ open space. Seward Park may not have a high DNL, but when it is being utilized by most of the population <sup>(the summer)</sup> it will have a very high DNL during the northern flow.

Optional:

Name:

Address (City, State, Zip):

Phone:

Fax:

E-mail:

What a shame if this split East turn proposal happens.

Sea-Tac International Airport Part 150 Study  
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1122 E. Pike St. #1286  
Seattle WA 98122

At any time.

You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net).

Comments:

The split-east turn is unacceptable for Seward Park. The turn doesn't offer a solution to West-Madrona's noise problems. It just moves the problem further south. In addition, the planes will be louder + lower.

Your study doesn't take into account the existing plane noise from Boeing Field and Renton Airport.

The Duwamish offers an acceptable alternative since the area is industrial + over water. Please seriously consider this option!

Optional:

Name: Carolyn Lubow Stern  
Address (City, State, Zip): 5127 S. Pearl St., Seattle, WA 98118  
Phone: (206) 723-4750  
Fax:  
E-mail: [Lubowstern@aol.com](mailto:Lubowstern@aol.com)

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To: mjwest@prodigy.net  
 From: Laura Gibbons <lgibbons@speakeasy.org>  
 Subject: Airplane routes  
 CC:

Barnard Dunkelberg & Co  
 c/o Mr. Michael West  
 1122 East Pike Street  
 Seattle, WA 98122

Gentlepeople,

I have learned of a plan to route many south-bound Seatac departure so that they fly over Seward Park. For most of the residents in our neighborhood, Seward Park is our bit of Wilderness, to have planes over, at relatively low altitudes, would be VERY intrusive and unpleasant make a different plan.

Sincerely,

Laura Gibbons  
 5021 43rd Avenue South  
 Seattle, WA 98118

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To: MJWEST@prodigy.net  
 From: Lubowstern@aol.com  
 Subject: jet noise at Seward Park  
 CC:

Dear Mr. West:

As a board member of the Lakewood - Seward Park Community Club, I  
 alarmed by the proposed Split East Turn. I moved to this community  
 ago because it is away from the freeway roar and offers the peace a  
 serenity of Seward Park.

Our community already gets airport noise from Boeing and Renton Air  
 any additional noise will make our neighborhood unlivable.

The proposed Split East Turn only moves the jet noise problem to an  
 neighborhood and does not offer a solution. Our community will org

like Leschi - Madrona. The Port of Seattle will have more complain  
 meetings. Leschi-Madrona and Medina may have some relief from airp

but the switch is neither equitable nor equitable. Planes will fly  
 louder over Seward Park than Leschi-Madrona.

Seward Park was not included in any round of your meetings concerni  
 proposal. In order to change the flight path, it is necessary to i

communities that will be effected!

Why was the Duwamish Corridor Proposal rejected? It would fly over  
 industrial area and water and impact far less communities.

Seward Park will do everything it can to fight the Split East Turn.  
 proposal is totally unacceptable to us.

Sincerely,

Carolyn Lubow Stern

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**To:** MJWEST@prodigy.net  
**From:** llubow@uswest.net  
**Subject:** Proposed Split East Turn  
**CC:**

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Michael,

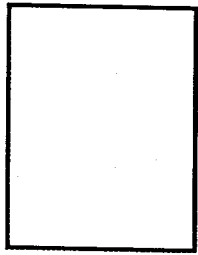
As a resident of Seward Park and a member of the Board of the Lakewood/Seward Park Community Club, I am greatly opposed to the split east turn being considered for the Seattle-Tacoma International Airport.

Currently, we are making our neighbors aware of the proposal. Hopefully it is not too late. Fliers are being prepared.

Our next Community Club meeting held at 4916 S Angeline will be devoted to this issue. The date is Thurs., 12/9 at 7pm.

Your presence at this meeting is greatly appreciated.

Linda R. Lubow



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To: MJWEST@prodigy.net  
 From: BSalia@aol.com  
 Subject: Proposed Change of Flight Path over Seward Pa  
 CC:

Dear Mr. West:

IWe were dismayed to hear from local community leaders that there i proposal to change the flight path of over 100 planes per day to a directly over the Seward Park neighborhood. This is an ill-advised extremely poorly thought out idea for several reasons.

First, the proposed flight path is closer to SeaTac, making the pla over the neighborhood 1000 feet lower than they currently do over t neighborhood. They are very audible there, and they are 1000 feet To come over Seward Park at 1000 feet lower is simply unacceptable.

Secondly, there is considerable flight traffic (and noise) from man routed into Renton Airport over the Seward Park neighborhood. We a bear the brunt of this noise; to add more is simply an unfair burde neighborhood.

Thirdly, the proposed flight path over Seward Park will create unac noise disturbing many species of wildlife in this old growth park, the Eagle population which is protected from this sort of disturban are currently speaking with environmental attorneys about this, and pursue protecting the endangered wildlife in this park.

There are other solutions to this problem, including re-routing som over Puget Sound, and pathways further north.

Please think carefully about this poor proposal. I'm sure that you understand the implications of any change, and will see that this i ill-advised and unacceptable solution to the flight patterns in thi

Sincerely,

Hannah Salia  
 Baba Salia  
 bsalia@aol.com

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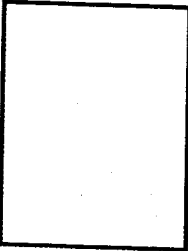
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To: MJWEST@prodigy.net  
 From: Mihalyc@aol.com  
 Subject: proposed jet split east turn  
 CC:

Dear Mr. West  
 I live on 51 st. and S. Juneau, we allready have more than enough over our neighborhood. When the airplanes are flying overhead we hav up the volume on televisions, stereos, or raise our voices during conversations. Excessive noise is proven to be detrimental to menta physical health, so the proposal should be banned. There are certai wich could and should handle more of their share of airplane noises let"s look for alternative routes  
 Sincerely;

Ildiko Palma  
 5903 51. Ave. S.  
 Seattle, Wa. 98118  
 (206) 723 4498  
 Mihalyc@aol.com



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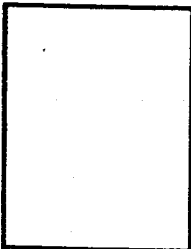
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**To:** MJWEST@prodigy.net  
**From:** bfairchi@windermere.com  
**Subject:** [No Subject]  
**CC:**

- 
- 
- 
- 
- 
- 



Dear Mr. West:

I have recieved a notice regarding the proposed Split East Turn for Southbound flights.

I have lived in the Lakewood-Seward Park neighborhood since 1977 an noticed over time that the flights from Sea-Tac have been distribut a larger area that now includes the Rainier Valley. There was neve notification to the neighborhoods that this was happening. It just happened. It would appear fron the diagram for the split turn that this proposal coninues this trend except that this time there is so notice. With or witout notice this is not a fair or acceptable c Has there been any thought to turn to the west so that the flights over Puget Sound?

The Southeast section of Seattle including Tukwila already have m their share of noise due to the older jets that use King County Fie This is really an issue on southflow days. Our area should not be to take additional flights. How about some thought regarding envir justice?

Sincerely,

Brian Fairchild

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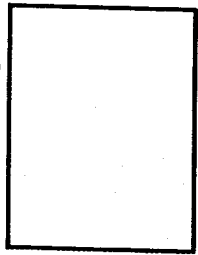
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To: mjwest@prodigy.net  
 From: Joseph Zunt <jzunt@u.washington.edu>  
 Subject: Jet Noise  
 CC:

Hi. Unfortunately, I missed the community meeting in Seward Park. family and I live in Seward Park and are very opposed to the propos split east turn. I would be happy to sign a petition, or send a le someone if you would like. I do not want the jet noise to ruin our neighborhood!



-----  
 Joseph R. Zunt, MD, MPH  
 Assistant Professor  
 Dept. of Neurology, Box 359775  
 University of Washington / Harborview Medical Center  
 Phone (206) 731-3715 Fax: (206) 731-8787  
 Pager: (206) 699-2357  
 Email: [jzunt@u.washington.edu](mailto:jzunt@u.washington.edu)

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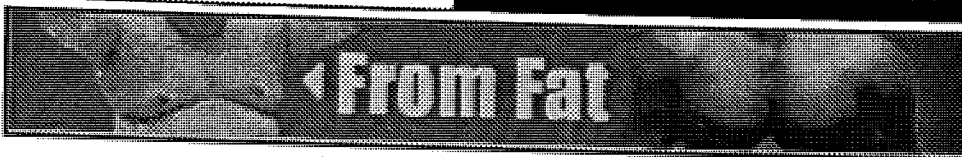
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To: DuaneA@wa.freel.net mjwest@prodigy.net dwight.pelz@metrok  
From: "Robert Hartley" <rob37778@home.com>  
Subject: Proposed Flight Path Re-route  
CC:

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To All Concerned,

I would like to express my strenuous objection to a proposal to re-northward, SeaTac Airport take-off traffic directly over my Lakewood Park neighborhood. One of the primary reasons we and our neighbors and remain here is the quietness of the area. Although we sympathize with the concerns of some of the people in neighborhoods further north from jet noise, we do not think that pushing a large portion of the problem further south is a good or fair solution.

For one thing, if jets leaving SeaTac turn east sooner, as proposed will not have gained as much elevation and the noise impact on us as a result of this new take-off path will be proportionately larger.

Additionally, the Seward Park peninsula represents a habitat jewel in Seattle's park system where everyone can enjoy the tranquility of a forest through old growth forest, a jog along a quiet shore, a glimpse of an eagle, beaver, or other wildlife. The repose of this park and the benefits it affords to all Seattleites would be degraded by the proposed re-routing scheme. This must not happen!

Please oppose this re-routing scheme and let us know what else we can do to make our views known.

Sincerely,

David M. Hartley  
Chair, Friends of 47th Avenue South

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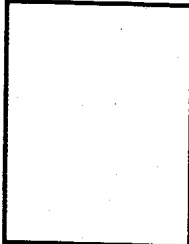
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 sales@airportnetwork.com seymour.r@portseattle.org  
 eric.tweit@ci.seattle.wa.us MJWEST@prodigy.net DuaneA@wa.  
**From:** "Jim McCullough" <makalajimu@hotmail.com>  
**Subject:** proposed NEW flight path over Seward Park  
**CC:**  
**Attachment:** untitled ( [view it](#) )



When my family and I were looking for a home to buy 10 years ago, w rejected certain neighborhoods (e.g. Beacon Hill & Capitol Hill) pr because of their direct location under the main Sea-Tac flight path

The area we bought in (Seward Park) did not have this problem (alth gets a good amount of noise from Boeing Field & Renton Airport as w the flights over nearby Beacon Hill). In short, airplane noise was FACTOR in our decision of where to BUY a home.

The Port has been making plans - basically in secret - to possibly new flight path directly over our homes (in fact a flight path which be GREATLY LOUDER since it would be of a GREATLY LOWER altitude com that of the Madrona area). Why were we not informed or consulted ab

How were we to know about committees meeting in areas far from wher live? These meetings may have been 'public', but how were we to kn their existence? Couldn't you have sent a mailing to those of us li the proposed area, i.e. Seward Park? Or didn't you want us to know have a voice?

There are better alternatives - we've recently heard talk that you the Duwamish industrial area & Elliott Bay more for flights. And, w something really smart - start a faster phaseout of the older, nois and implement much more quickly restrictions on aircraft noise - th technology IS there to do this - and the airlines DO have the money which to do this.

Reiko McCullough  
5132 S. Farrar  
Seattle WA 98118-2130

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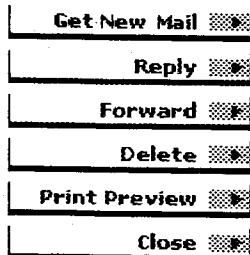
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To: mjwest@prodigy.net  
 From: "Christina Roux" <chroux@email.msn.com>  
 Subject: Sea-Tac Part 150 Study  
 CC:

The study done by Barnard Dunkelberg and Company surreptitiously w  
 to sell a "Split East Turn" as a fair "alternative" if  
 fundamentally flawed  
 in three ways:

- 1) An average noise level is used as a comparative measure for alte  
 sites. The cut off being 75 db. The fact that a sharp right turn at  
 over the Rainer Valley - Seward Park will generate considerable mor  
 than the present gradual turn at 4000 - 5000 ft further North is  
 conveniently  
 ignored ( as in the table " Overflights > 75 db SEL per day, by  
 Neighborhood"). Why not give projected peek noise levels the same w  
 and  
 comparative importance than a arbitrary average ?
- 2) If we are set on using an "average", let's use a city wide  
 average, and  
 compare alternative flight paths. Any reasonable person could then  
 alternatives such as "Split East Turn" would do nothing to lower  
 noise  
 levels.
- 3) The study does not address the neiborhoods that are most respon  
 the increase in flights. The " Split East Turn" alternative simply  
 wishes to  
 redistribute airplane noise to a neiberhood that is probably  
 disproportionately not responsible for it.
- 4) The study implies that a equitable distribution of Sea-Tac noise  
 "fair". Selectively choosing city ills and distributing them  
 equally has  
 nothing to do with "fair". If we are in the process of distributing  
 city  
 ills, let's do a fair and comprehensive job. If the port, the City  
 or  
 groups like "Citizens for Airplane Noise Equity" needs a more  
 comprehensive list of city ills, I would gladly supply one.

It was shocking that the only elected official at the meeting was a  
 Council member. Politically this study pits South against North; le  
 have this deteriorate into a WTO protest.

Nick Roux

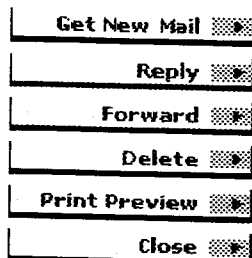


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To: MJWEST@prodigy.net  
 From: Dan Atkinson <atkinson@oz.net>  
 Subject: Rerouting of aircraft flight paths  
 CC:

Mr. Michael West  
 Barnard Dunkelberg & Co.

Dear Mr. West,

I have recently become aware that the advisory board you represent to recommend diverting half of the usual flow of aircraft from its flight path to a new one over our neighborhood. Of course, we are incensed over this proposal. It is simply not fair and we will fig

First of all, I can empathize with the people farther north wishing alleviate some of their noise. They have a valid concern. The pro lies in the property values, before and after the alteration of the path. Our more northerly neighbors purchased their properties with flight path existing and consequently paid a reduced price due to t fact. We, on the other hand, paid a premium for the peace and quiet this neighborhood. If you change the flight path, you are in effect raising their property values and decreasing ours. This is patently since we all made our choices when we moved into these neighborhood proposed change is also unfair, because it, once again, shifts the burden from the more affluent, prosperous and white neighborhoods to affluent, less prosperous and more ethnically diverse neighborhoods ours.

As I see it, there are several other issues. One is the level of n

By continuing north on the current flight path, more altitude is r before the planes make their eastward turn, thereby mitigating the noise somewhat. By turning early over Seward Park, the noise level be increased by the lower altitude. There is also a safety issue. making the southbound turn early, I can see by the proposal maps th more of the turn is made over dense neighborhoods and at a lower al than with the current flight path.

I also question why this is the only proposal under consideration. seems obvious that in order to impact the least amount of people an density, one could simply angle the flight path slightly to the east(perhaps 5 deg. NNE instead of 360 deg. N) so that the path was little closer to our neighborhood and a little farther away from it existing path and also struck the lake directly and without turning could then proceed north up the lake, turning east between Kirkland Bothell where the density is the least. Finally turning south again

they get east of the population centers.

Michael, we here in the Seward Park neighborhood are adamantly oppo  
the proposed split east turn. I urge you to reconsider this propos

Sincerely,

Daniel Atkinson & Diane Osland

Move this message to:

Thomas L. Markl  
3364 Lakewood Avenue So.  
Seattle, WA 98144  
(206) 723-9438

---

December 9, 1999

Barnard Dunkleberg and Company  
c/o Mr. Michael West  
1122 East Pike Street  
Seattle, WA 98122

Dear Mr. West:

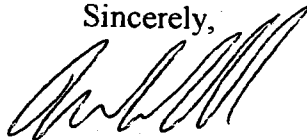
I am writing to express my opposition to the proposed "split-east turn" option for routing of north-flow flights from SeaTac Airport.

Although I agree that something needs to be done to mitigate the impact of the current flow pattern on neighborhoods, this proposal is a cure that is as bad as the disease. By requiring half of the east turns to occur further south and, as a result, at lower altitude, an even more serious noise problem would be imposed on many communities in the Rainier Valley, south Mercer Island, and south Bellevue, than the noise problems currently experienced in Leschi, Madronna, Mt. Baker, north Mercer Island and Bellevue.

Since SeaTac Airport provides economic benefits to the entire Puget Sound region, it seems only fair that the costs and inconveniences of airport operations should also be spread as widely as possible. I urge you to study alternatives that route flights over nonresidential areas, permit higher altitude turns, and, when necessary, spread the impact of noise over more residential communities. It is very unfair that both today and under the proposed "split-east turn" a small number of communities must absorb the majority of the impacts. In particular, I would like to see increased routing over the Duwamish and Elliot Bay considered.

Routing over the Duwamish and Elliot Bay was used widely years ago but, as I recall, was dropped because of the higher fuel costs to the airlines. I think that higher fuel costs and the resulting small increase in ticket prices is worthwhile, since it would improve the quality of life in many of our neighborhoods and communities.

Sincerely,



cc: Mr. Paul Schell  
Mr. Ron Sims



November 28, 1999

Citizen's Advisory Committee  
Federal Aviation Administration Part 150 Study  
Seattle-Tacoma International Airport

Dear Committee Members,

My name is Allyson Jackson and I am a resident of the City of Medina. I have attended several of the Part 150 Operation Subcommittee meetings including the meeting on November 17, 1999. I support the proposal to split the East Turn Flight Track as the **first step** in solving a regional jet noise problem.

I understand that dispersing airplane traffic over the Puget Sound region is a complex and controversial issue which brings out the fighting spirit of many. I empathize with those individuals who fear change in the existing flight tracks. However, living under the path of over 220 planes on any given day has made me a believer in dispersing airplane noise. On a graph, 220 planes taking the East Turn show as a solid mass of lines. At our homes, the reality is over three and half hours of noise between 6 a.m. and 10 p.m., because the noise of each plane lasts at least a minute. The noise begins usually right at 6 a.m., sometimes as early as 5:30. The planes boom overhead, shake the windows and wake my family members out of dead sleep. Just as we are about to drift back to sleep, the next plane arrives, then the next, then the next, every 3 - 5 minutes for an hour or more. Contrary to the Port of Seattle's consultant report, we can go back to sleep after the first plane. Several planes are not bothersome. It is the repeated awakenings every few minutes for over an hour that become intolerable. Periodically throughout the day, this pattern is repeated. The planes come roaring through one after another, stopping conversation and interrupting activities and sleep for long periods of time. I will share one example of hundreds to illustrate this point.

This past summer a large group of neighborhood children put on a play to raise money for a charitable cause. After weeks of practice and preparation, they performed the play one summer evening in a neighbor's backyard for about 70 people. The stage was set. The performers made their entrance and just as the show began, the planes began their evening flights overhead. The children tried repeatedly to shout over the noise of one plane after another, but the jets just drowned them out. The performance lasted about 40 minutes, the planes continued for much longer.

So although I empathize with those individuals who oppose splitting the East Turn, I have a difficult time determining why their children, parks, schools, bald eagles and blue herons are more precious than ours. We all have children, schools, wonderful parks, natural habitat, homes and neighborhoods that we treasure and cherish. I am also disturbed by comments such as "don't export your noise to us." The jet noise is not created by Leschi, Beacon Hill, Enatai or Medina. It is noise from a regional airport which we ALL use. That airport and those flights provide a tremendous benefit to ALL who live in the Puget Sound Region. Therefore, the noise and negative impact of air traffic belong to ALL of us; not just to the unlucky individuals who happen to live under the path of the East Turn; a flight track which has evolved over time in it's usage from perhaps a dozen planes to over 220, a flight track whose environmental impact was never studied and a flight track whose implementation was never intended to handle the volume that it does today.

I respectfully challenge this Citizen's Advisory Committee to move beyond the community in-fighting and political pressure and focus on the problem. All of us live in an urban environment. Urban environments have airports. Airports have jets and jets make noise. The problem is: Should the airplane noise be concentrated over several communities or should it be shared equally?

I believe that there is a win/win solution. First, implement the split East Turn proposal to provide relief to those neighborhoods which are currently experiencing the greatest noise levels. Concurrently, require the FAA and Port of Seattle to open up the Duwamish industrial corridor for increased airplane traffic, thereby

minimizing the total number of planes utilizing the split East Turn. Finally, impose restrictions on the maximum number of planes allowed to fly over residential communities to protect them from intolerable noise levels in the future. As SeaTac continues to grow, the skies overhead will surely become more crowded. This win/win proposal requires all the communities to stop fighting one another and unite. It will take all of us working together with the Port of Seattle and FAA to change the current policy regarding the Duwamish corridor. If all the communities involved continue to spend time, energy and money fighting one another, no one will win. If the communities and their respective representatives on the Citizens Advisory Committee can unite, work together and take responsibility for this regional issue, we can all be winners.

Thank you.

Allyson Jackson  
7633 NE 14th Street  
Medina, WA 98039

cc: Mr. Michael West, Barnard Dunkelberg & Company  
City of Medina  
Ron Seymour, Port of Seattle Noise Abatement Office  
Rob McKenna, King County District #6

12-7-1999

ATTN: DWIGHT PELZ

SUBJECT: PROPOSED JET FLIGHT  
PATH OVER SEWARD PARK

DEAR DWIGHT,

MY WIFE AND I STRONGLY  
OBJECT TO THE PROPOSED  
JET FLIGHT PATH WHICH WILL  
PUT A HIGH NOISE AREA  
DIRECTLY OVER OUR HOUSE.

THERE ARE OTHER OPTIONS.

PLEASE USE ALL YOUR  
ABILITIES TO COUNTER  
TRAUMATIC REVISION.

BEST REGARDS,

Clint and Lu Snow





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**To:** MJWEST@prodigy.net  
**From:** "Turner, Helen E" <Helen.Turner@PSS.Boeing.co>  
**Subject:** Against Flight Path Change  
**CC:**

I agree with Ray Akers' point the "the solution is not moving the n but...insisting that people's quality of life is given equal wieght needs of big business and the convenience of the Port of Seattle."

Official response to increased demand for air traffic seems based o notion that airlines have an unassailable right to add more flights airport has no choice but to accommodate them, no matter what the c local population. How does such policy reflect a government of the for the people, and by the people? Rather, it's a policy "of busin profit, for business profit, and by business profit, and forget the the people.

Well, the cost is high. Even at current traffic levels, I am frequ awakened at night, or in the early morning by jet noise. At other day, jet noise drowns out music and/or conversation. When one is o jet noise is even more deafening, drowning out the voices of neighb children, birds, and blasting away peace and quiet. And all this b flight plan is changed.

Why does big business have the right to pollute the air with fuel e and noise?

The Port of Seattle needs to do 2 things. First, say "no" to more flights. Second, route current flights over big-business corridors those who profit from the flights have to put up with their polluti

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Public Open House  
Dec. 2<sup>nd</sup>, 1999

Comments

Thank you for taking the time to comment on what you have seen and heard at tonight's open house. You may submit your comments now in one of the boxes marked "Comments", or you can mail them to:

Michael West  
1122 E. Pike St. #1286  
Seattle WA 98122

At any time.

You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net).

Comments: Please apply the "1998 noise contours with noise remedy boundaries" map when determining noise abatement remedies, including insulation and windows. This is the most current data available. Decisions should be made on what is current, not on what might be or should be in the future.

Optional:

Name: Jon & Reine Huntsman  
Address (City, State, Zip): 24719-12<sup>th</sup> Ave. So.  
Phone: Des Moines, WA 98198  
Fax:  
E-mail: (206) 824-3989

Sea-Tac International Airport Part 150 Study  
Public Open House  
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Michael West  
1122 E. Pike St. #1286  
Seattle WA 98122

At any time.

You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net).

Comments:

*Hear planes all night long & day. Can not talk in the yard when planes go over.*

*Recommend using the 1998 Noise Remedy Contour map.*

Optional:

Name:

Address (City, State, Zip):

Phone:

Fax:

E-mail:

*Laurie Lee*

*24601 - 12<sup>th</sup> Ave So Des Moines, WA 98198*

*(206) 824-0286*



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---

December 2, 1999

Mr. Ryk Dunkelberg  
Bernard Dunkelberg & Company  
c/o Michael West  
1122 E. Pike Street  
Seattle, WA 98122

Re: Sea-Tac Part 150 Study

Dear Mr. Dunkelberg:

We would like to add our support to the numerous members of the Citizens Advisory Committee who urged the consultants to do noise modeling to reflect the impact of removing the flights destined to the Los Angeles area from the East Turn and routing them to the Duwamish corridor.

I think everyone in the room at last night's meeting was aware that this would bring substantial relief to those persons under the current and/or potentially revised flight tracks. As Suzanne Alexander made clear, however, no one in the room had the authority to direct that change. As the decision will be up to people with less familiarity about the Seattle air space, we believe it is important to have the information available to convince these decision makers that there will be sufficient benefits to justify the efforts necessary to make the change.

Very truly yours,

*Kirk R. Wines*  
Kirk R. Wines  
Medina City Attorney

cc: City of Medina  
Barbara Lichman

Sea-Tac International Airport Part 150 Study  
Public Open House  
Dec. 2<sup>nd</sup>, 1999

Comments

Thank you for taking the time to comment on what you have seen and heard at tonight's open house. You may submit your comments now in one of the boxes marked "Comments", or you can mail them to:

Michael West  
1122 E. Pike St. #1286  
Seattle WA 98122

At any time.

You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net).

12/2/99

Comments:

This entire exercise is like squeezing a water balloon. There is not a total reduction of noise. I advocate strongly routing all jet aircraft over Elliot Bay & North up Puget Sound to a minimum altitude of 7,000 feet before any turns. An analysis of this alternative must be made.

Optional:

Name:

Address (City, State, Zip):

Phone: 425 4532675

Fax:

E-mail:

Additional fuel costs would be reflected in increased air fares for those of us using the Airport.

BRUCE NURSE  
2226 108th Ave SE  
Bellevue, WA 98004



Sea-Tac International Airport Part 150 Study  
Public Open House  
Dec. 2<sup>nd</sup>, 1999

Comments

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Michael West  
1122 E. Pike St. #1286  
Seattle WA 98122

At any time.

You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net).

Comments:

With regard to the North-East turn  
no recommendation should be made  
until there is full utilization of  
the Duwamish-West turn corridor

Optional:

Name: *Bryan Cairns*  
Address (City, State, Zip):  
Phone: *(206) 232-0872*  
Fax:  
E-mail: *BScairns@Home.com*

Sea-Tac International Airport Part 150 Study  
Public Open House  
Dec. 2nd, 1999

Comments

Thank you for taking the time to comment on what you have seen and heard at tonight's open house. You may submit your comments now in one of the boxes marked "Comments", or you can mail them to:

Michael West  
1122 E. Pike St. #1286  
Seattle WA 98122

At any time.

You can also e-mail your comments to [mjwest@prodigy.net](mailto:mjwest@prodigy.net).

Dec, 9-1999.

Comments:

Sea-Tac International  
Airport 150 Study

I saw some of the charts & data at Tree Hi School last week. I suppose ~~so~~ it is some value to some one? But does it fix any problems?

We live about 100 ft west of some of the houses that are sound ~~insulated~~ insulated. One of the houses on this block, the port insulated this fall. on 12 ave, S,

But all of the yack of sound proofing. Moving wet lands. Traffic on the roads. More runways are not fixing the needs.

Optional:

Name:

Address (City, State, Zip):

Phone:

Fax:

E-mail:

What is needed is a new Air Port.

Some where else

Vernon Pomeroy  
246022-12 ave S, Des Moines  
206-878-6471  
98198

MR & MRS. Vernon Pomeroy

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mjwest  
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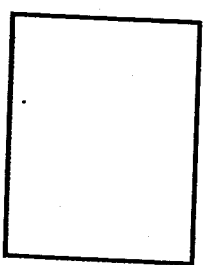
To:  
 From: russ alexander <rda5050@go.com>  
 Subject: [No Subject]  
 CC:

To: [mjwest@prodigy.net](mailto:mjwest@prodigy.net)

Cc:

Date: Tue, 07 Dec 1999 0:11:48 -0800 (PST)

Subject: Flight pattern



You are probably ggoing to be sorry to hear from me on this subject

We have lived in our current house for over 26 years. Prior to this less than a half mile from SeaTac. I will be fully in favor of th in flight pattern if it helps them to build a third runway at SeaTa change in pattern is so slight, the residents of Seward Park won't realize there has been a change in the pattern. So please, stop tr stir up trouble when there is none.

russ

<http://www.go.com>

Sea-Tac International Airport Part 150 Study  
Public Open House  
Dec. 2<sup>nd</sup>, 1999

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Comments:

Abandon 3rd runway idea.  
Take over Mc Chord ; use Paine

Optional:

Name: *EE Moore*  
Address (City, State, Zip): *Des Moines, WA 98198*  
Phone: *878-8078*  
Fax:  
E-mail: *edmore2@JUNO.com*

Sea-Tac International Airport Part 150 Study  
Public Open House  
Dec. 2<sup>nd</sup>, 1999

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Comments:

As a homeowner in Columbia City (Site #2) I strongly oppose the Northern Dispersion Scheme. Even currently the noise levels are disturbing particularly under low cloud cover. I prefer the TMS-Alternative. While it concentrates the areas of noise, it spares so many areas further annoyance. I feel it would be an improvement over current conditions, rather than a deterioration.

Thank you for the opportunity to voice my opinion.

Optional:

Name: Caroline Kreiser  
Address (City, State, Zip):  
Phone:  
Fax:  
E-mail: [ckreiser@jonesandjones.com](mailto:ckreiser@jonesandjones.com)

Sea-Tac International Airport Part 150 Study  
Public Open House  
Dec. 2<sup>nd</sup>, 1999

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Comments:

If you consider sharing the noise - ie equalizing  
the noise — then why isn't an effort  
being made to equalize North & South  
flow (the "optional neutral" weather times)

Optional:

Name:  
Address (City, State, Zip):  
Phone:  
Fax:  
E-mail:

Sea-Tac International Airport Part 150 Study  
Public Open House  
Dec. 2nd, 1999

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Comments:

WE HAVE BEEN RESIDENTS OF HUNTINGTON PARK (AN AREA OF ACTIVE SENIORS) SINCE 1980, THE BOUNDARY LINE FOR NOISE TREATMENT IS THE GREEN BELT BACK OF OUR 95 FOOT DEEP LOT. PEOPLE ON 13TH S (WE LIVE ON 12TH) ARE ABOUT 100 FEET TO THE EAST OF US & HAVE NOISE TREATMENT ON THEIR HOUSES, OUR HOUSE HAS A PATIO DOOR FACING EAST FROM OUR KITCHEN THE PATIO IS CONCRETE, NOISE BOUNCES OFF OF THE PATIO TO THE PATIO DOOR, CONVERSATION, USE OF THE TELEPHONE, LISTENING TO ~~THE~~ RADIO, OR A NARRATIVE ON TV ALL STOP FOR PASSING AIRPLANES.

Optional:

Name: PAUL SHORES  
Address (City, State, Zip): 24610 12TH AVE S, DES MOINES, WA  
Phone: 206-874-1658 98198-3866  
Fax: ~~2~~  
E-mail: