

**PORT OF SEATTLE**  
**MEMORANDUM**

**COMMISSION AGENDA**  
**STAFF BRIEFING**

Item No. 9  
Date of Meeting February 23, 2010

**DATE:** February 18, 2010

**TO:** Tay Yoshitani, Chief Executive Officer

**FROM:** Stan Shepherd, Manager Airport Noise Programs *SS*  
Diane Summerhays, Director of Community Development *DVS*

**SUBJECT:** Policy Roundtable: Part 150 Aircraft Noise and Land Use Compatibility Study

**SYNOPSIS:**

The Airport is embarking on a Part 150 Study to comply with Federal Aviation Administration (FAA) requirements. The two-year study will evaluate noise within the communities surrounding the airport while adhering to established FAA noise contour metrics and procedures to measure noise impacts. The study includes a comprehensive public information and comment process to gather community-wide input. The first of a series of public workshops is scheduled for February 24, 2010. The Study will also be discussed at the Highline Forum to provide elected officials from neighboring cities with an opportunity to provide regular input, and city land use planners will participate in the Technical Review Committee meetings.

The Part 150 regulations do not require the Study to consider flight track changes with no noise reduction benefit to the annual 65 Day Night Level (DNL) noise contour, but, if the community suggests changes, then Port staff has suggested methods to be responsive.

The Commission and the mayors from Burien, Des Moines, Federal Way, Normandy Park, SeaTac and Tukwila will discuss the Part 150 Study at a Policy Roundtable during the February 23 Commission meeting. The Commission will also receive briefings on the Study quarterly or as needed. The Part 150 project manager from Landrum & Brown plans to attend the Commission meeting and will conduct the public workshop on February 24.

**BACKGROUND:**

Officially known as the Federal Aviation Regulation Part 150 Aircraft Noise and Land Use Compatibility Study, Sea-Tac Airport's Part 150 Study is a planning effort designed to address and mitigate the effects of aircraft noise within the airport communities. The FAA-recommended process provides for involvement of the Airport, aeronautical users, elected officials and city planners from surrounding jurisdictions, and interested citizens. All parties work in partnership to reduce the noise impacts on the community through mitigating efforts that

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can be undertaken by the Airport and airport users and by local jurisdictions through their zoning processes and building codes. A comprehensive public information and comment process is part of the Part 150 Study, and the Highline Forum will be mechanism where elected officials from neighboring jurisdictions regularly discuss and provide feedback on the Study.

In 1985, the Port completed the first Sea-Tac Airport Part 150 Study. Since that time, there have been two other updates to the Study in 1993 and 2002. Through the Airport's Part 150 programs and the 1990 Noise Mediation Project, the Port has been a national leader in both noise abatement and sound mitigation. To date, we have spent over \$500 million on total mitigation programs, including home and school insulation, property acquisition and relocation and other noise reduction efforts.

Most Part 150 studies are voluntary. However, Sea-Tac's current Part 150 Study is a requirement stemming from the FAA Record of Decision (ROD) that approved the Airport's Master Plan and the construction of the third runway. The FAA ROD obligated the Port to commence a Part 150 Study approximately one year after the opening of the third runway.

A Part 150 Study is broken down into two general phases. Phase one involves defining which sensitive land uses, such as homes and schools, within the communities are significantly impacted by aircraft noise, both now and in the future. The resulting products are called "noise exposure maps" (NEMs). The FAA must approve the NEMs.

Phase two involves the evaluation of the airport's current noise reduction efforts and the consideration and eventual implementation of new ways to improve those efforts. The resulting program is called the "Noise Compatibility Program" (NCP). After the NCP has been completed, there will be a public hearing to discuss the NCP draft recommended actions. Before the recommendations are submitted to the FAA, the Port Commission must approve them. FAA approval is also required. It is necessary to obtain these approvals before the Port can receive federal funds for noise mitigation projects. Attachment "A" provides an example of the 65 DNL noise contour for 1998. Attachment "B" is an example of a recommended action from the 2002 Study.

Over this past year, there have been a number of opportunities for Airport staff to hear from the public on specific noise issues, and these will be part of the scope of work, including an update to the hush house study and recommendation, an analysis of sideline and taxiing noise, an evaluation of the need for acquisition in the South Approach Transition Zone, a review of the potential for further insulation within the 65 DNL contour, and discussions about a runway use agreement with the FAA. The study team will specifically compare the environmental impact as defined by the Master Plan Environmental Impact Statement (EIS) to the existing situation. During the public participation process, the public may propose further topics that will be considered for inclusion in the study.

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While the public's perceptions are important factors in determining the Study elements, the Part 150 study recommendations themselves are driven by data. Often the data presents quite a different picture than the perceptions people have. For example, given the reduction in the number of flights and the elimination of noisier aircraft, the current noise contours may be smaller than originally anticipated in the Master Plan EIS that addressed likely third runway noise impacts. If that is true, changing demand for air travel and advances in quieter engines and airframe technology are among the causes that explain why these projected impacts may not have occurred. It may be difficult to explain to the community that even though there may be increased flights over their neighborhood, measurable noise levels have actually declined. Federal regulations also require that the noise analysis be conducted using the DNL (day/night level) noise metric, which is an average of noise measured over a year with a penalty for nighttime noise. While this metric is the national standard, this standard isn't generally how people talk about their own subjective perceptions when experiencing noise levels. Quantification of noise impacts must be presented in terms of the DNL contour, and, accordingly, impact mitigation is focused within the 65 DNL.

Over the years, the debates over potential flight track changes for noise reduction purposes have been the most contentious part of the Part 150 studies. Although there have been a number of suggestions made by communities and individuals, with the exception of long-standing noise abatement procedures, the FAA has not approved any changes. The reasons have been varied: The noise benefit would be insubstantial; the noise was only being shifted to another community; there were safety or efficiency issues; or the FAA would not move a flight track for noise purposes unless all communities agreed. However, the Part 150 Study team cannot ignore requests for consideration of flight track changes to "control the operation of aircraft to reduce exposure of individuals (or specific noise sensitive areas)" to noise in the area around the airport.

### **PUBLIC PARTICIPATION PLAN:**

Prior to and during the development of a Part 150 noise reduction program, the FAA requires the Airport to afford adequate opportunity for the active and direct participation of all parties (public agencies, aeronautical users and the general public) to submit their views, data and comments on the formulation and adequacy of the program.

In response, the Port has designed a process, approved by the FAA that is inclusive and will effectively engage everyone who wants to be involved. The program provides a variety of methods of engagement tailored for those with different interest levels and perspectives (i.e, airlines vs. general public vs. local jurisdictions).

The key public outreach mechanism utilized by the Port is a series of public workshops held throughout the Part 150 Study process. Each workshop will be built around the study element that the Part 150 Study is currently engaged in. Each will include smaller breakout sessions, where members of the public, engaging directly with facilitators, can provide input, ask

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questions and offer recommendations in a more personal setting. The first public workshop is scheduled for February 24, 2010, at the Mount Rainier High School in Des Moines.

To advise the Port on technical matters, a Technical Review Committee (TRC) will be formed comprised of land use planners from the surrounding cities and aviation and airline representatives – all with very specific technical expertise. They will be asked to review data and reports and offer feedback on all of the technical documents related to the study. All Highline Forum area communities have appointed a land use planner representative to the TRC except for Normandy Park. Normandy Park has indicated they are short-staffed in their planning department and are unable to send a representative until they can fill some positions. The first TRC meeting was held on January 19, 2010.

During the last Part 150, a Citizen Advisory Committee (CAC) was the principal public body interfacing with the Part 150 team. Since the membership on the CAC was limited to each city's appointed representative, the Port found that many members of the public felt left out of the proceedings. The current public outreach process improves on the public outreach methods used during the last Part 150 Study by giving everyone interested in participating in the Study the same robust ability to interact directly with the Part 150 team (either through the public workshops, the TRC or the Highline Forum) and influence the process.

Port staff will brief the Commission on the Study quarterly or more frequently if needed.

Attachment "C," the Part 150 Study Public Participation Fact Sheet, provides further details on public participation.

### **FLIGHT TRACK CHANGES:**

Noise abatement procedures for Sea-Tac flights have been in effect for many years, and the Airport has been a national pioneer in noise reduction programs. The FAA assigns flight corridors to reduce or limit the spread of aircraft noise. The most prominent noise abatement procedures are the "straight out" departure tracks, which confine departing aircraft upon take off to very narrow corridors, and the Elliott Bay arrival and departure corridors, which seek to restrict aircraft to corridors over the industrial areas and then over water as much as possible. All of these procedures are monitored by the Port staff, and procedural compliance is discussed with the FAA on a monthly basis. In cooperation with the FAA, Alaska Airlines, the Boeing Company, and the Port, as part of the Greener Skies initiative, we are likely to see new procedures within the existing noise abatement corridors in the coming years that will reduce noise and emissions outside the immediate Airport area.

The FAA is the only entity with the authority to change flight procedures and manage aircraft in flight. As the Airport operator, the Port's role in considering flight track changes is to study and recommend changes which would reduce noise exposure within the 65 DNL contour to individuals and would not compromise safety and efficiency. Since flight track changes farther

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from the airport have little to no impact on reducing the 65 DNL contour, the Airport would have less involvement in implementing these changes. Recommendations for any changes are approved by the Commission and then are passed on to the FAA through the Part 150 Study. Any flight track change recommendations that do not reduce noise within the 65 DNL noise contour will generally not be approved by the FAA. In 1990, the FAA implemented what is called the "Four Post Plan" at the Airport, which altered the airspace with new procedures for safety and efficiency, but, since then, the FAA has not changed any flight tracks based on noise for the Airport's airspace.

We are proposing the following response to flight track recommendations from the community, which we have discussed with the FAA's Air Traffic Manager:

- The study team will determine if the change is within the 65 DNL or will affect the 65 DNL. If yes, it will be screened for possible inclusion in the study scope.
- The study team will determine if the proposal has been considered in the past and rejected. If the reasons for the rejection are still valid, the proposal will not be included in the study and that decision will be documented and provided to the proposer.
- If the study team determines that the issue is more directly related to non-compliance of a noise abatement procedure, noise staff will raise the issue immediately with the FAA.
- All other requests for flight track changes that are not pertinent to the areas right around the Airport within the 65 DNL will be forwarded to the FAA for a response. If requested by the FAA, the Port will provide supplementary data if available and if it would be helpful.

## **FINANCIAL INFORMATION:**

The consultant selected to do the Part 150 Study is Landrum & Brown, a nationally recognized consulting firm that has done over 100 Part 150 studies. Consultant contract costs are \$1,361,486. This includes \$560,635 for public outreach and community involvement, the remainder \$800,851 is for technical analysis and other costs.

## **SCHEDULE:**

See Attachment "D" for the full project schedule.

## **OTHER DOCUMENTS ASSOCIATED WITH THIS BRIEFING:**

Attachment A – 65 DNL Contour in 1998.

Attachment B – Fly Quiet Program recommendation from 2002 Study.

Attachment C – Part 150 Study Public Participation Fact Sheet.

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Attachment D – Full Project Schedule.

### **PREVIOUS COMMISSION ACTION:**

Resolution No. 2943, as adopted on January 8, 1985 – Created the first Seattle-Tacoma International Airport Part 150 program, established the Port's Noise Acquisition and Insulation programs.

Resolution No. 3062 adopted May 8, 1990 – Adopted the Noise Mediation Agreement, a series of noise reduction measures negotiated through an environmental mediation process.

Resolution No 3144 adopted July 13, 1993 – Amended the Part 150 program to include additional operational and land use elements to the Airports Noise Compatibility Plan

Resolution No. 3212 as adopted on August 1, 1996 – Adopted a Master Plan Update for Seattle-Tacoma International Airport, approved development of a new dependent air carrier runway, and committed to fulfill additional noise reduction measures in accordance with the Puget Sound Regional Council Resolution A-96-02

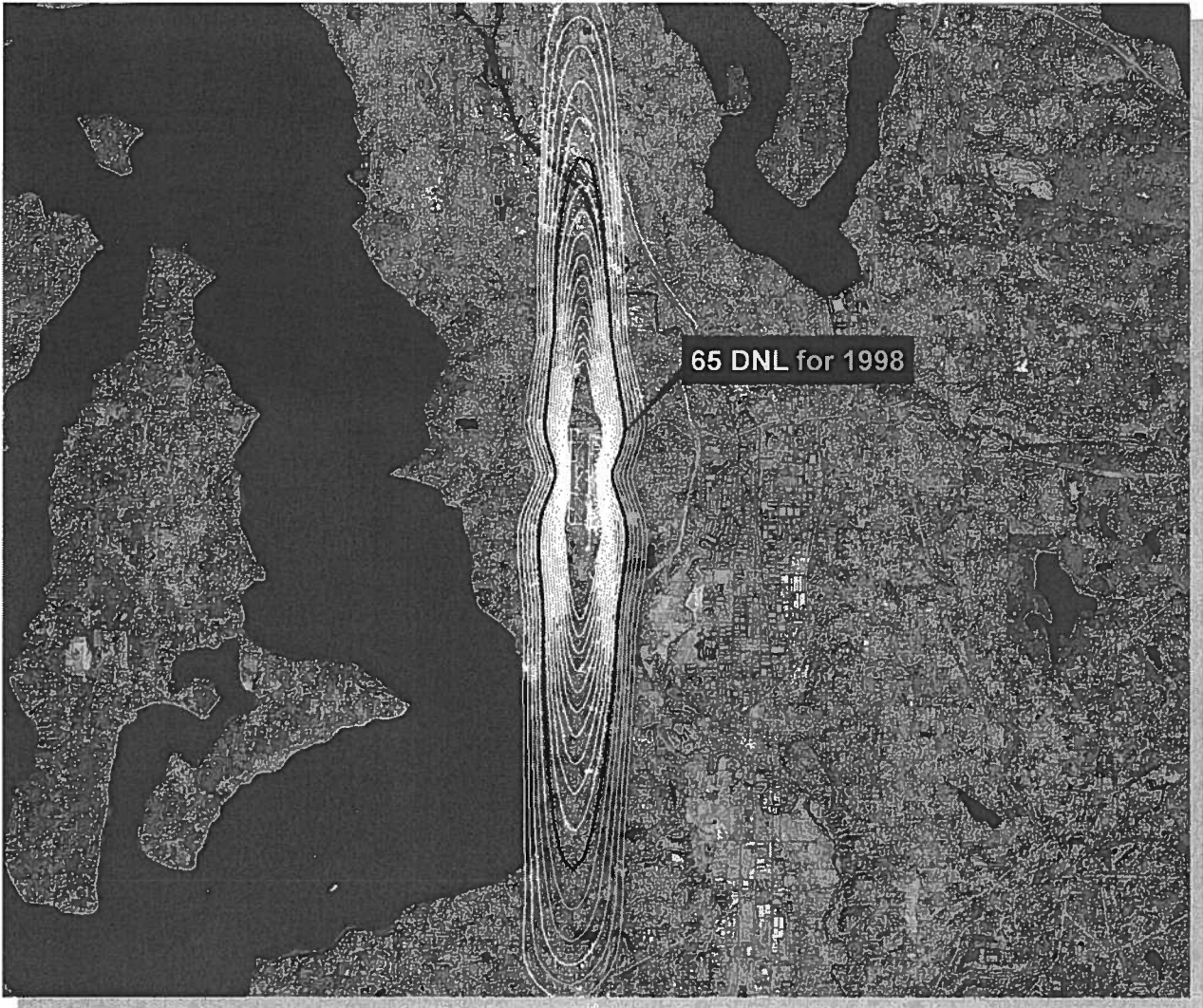
Resolution No 3443 as adopted December 12, 2000 – Updated the Part 150 program by adding operational and land use elements to the Airports Noise Compatibility Plan, which was formally approved by the FAA in 2002.

Request to execute a Part 150 Noise Study contract on June 23, 2009 – Authorized the CEO to procure and execute a contract for consultant services to implement an update to Sea-Tac's Part 150 Noise Compatibility Plan in the amount of \$500,000 to \$1,000,000.

Request to increase the authorized amount for consultant services on November 23, 2009 – Authorized the CEO to procure and execute contracts for consultant services up to \$2.5 million to implement the Part 150 Noise Compatibility Plan, representing an increase of \$1.5 million over the previously authorized amount.

Item 9 – Attachment A

Date of Meeting - February 23,



**A-12: DEVELOPMENT/IMPLEMENTATION OF FLY QUIET PROGRAM****ISSUE**

Encourage greater compliance with noise abatement procedures, work with operators to reduce single event noise levels, and continue to raise awareness of citizens noise concerns with the FAA and operators.

**NEW ACTION**

The Fly Quiet Program should be developed to:

- Monitor adherence to ideal noise abatement flight tracks
- Evaluate success of airlines, aircraft types and other variables
- Establish goals and track level of improvement over time
- Offer incentives for improvement

The Fly Quiet Program should include the following elements:

- Aircraft noise should be related to its effects on people including such factors as annoyance, speech interference and sleep disturbance
- Comparative fleet quality between airlines should also be included
- The program should utilize measured data from the Airport's noise monitoring system
- A method of normalizing data to account for airlines that most efficiently serve the region's air transportation needs should be developed.
- Incentives of sufficient importance that airlines will take notice of the results, and
- Pilots and air traffic controllers should be included, if possible.

**COMMENTS**

A Fly Quiet Program has the potential of reducing single event noise levels and encouraging greater compliance with preferential flight corridors and procedures. The program could potentially result in overall reductions in cumulative noise levels in some focused areas around the Airport as well. Identification of how individual aircraft operate at specific locations compared to the way the majority of aircraft operate, can help encourage the noisier operations to lower noise levels and/or adhere to established flight tracks. It is important to note that the safety and efficiency



of the air traffic system will always take precedence. The specific elements and reporting techniques will be developed with the follow-on committee. The Fly Quiet Program cannot become fully implemented until the new Noise Monitoring System has been tested and is operational.

***COST***

The cost for this Action will be part of existing staff functions. The Noise Monitoring System is currently being installed.

***RESPONSIBLE PARTIES***

The Port is responsible, through consultation with the follow-on committee, for developing the final elements of the Program, for obtaining the relevant data from the Noise Monitoring System and for preparing reports. The follow-on committee is responsible for helping develop the elements and working with the Port in evaluating the results. FAA and operators are responsible for trying to follow the Fly Quiet recommendations.

***PORT ACTION***

The Port will evaluate and identify, in conjunction with the follow-on committee, the elements of the Fly Quiet Program, evaluate the Noise Monitoring System and initiate the Program.

***TIME FRAME***

The elements of the Fly Quiet Program can be identified and developed as soon as the follow-on committee is established. The Program cannot be initiated until installation of the Noise Monitoring System is completed.

## PART 150 STUDY

# PUBLIC PARTICIPATION FACT SHEET

### PART 150 OVERVIEW

Officially known as the Federal Aviation Regulation Part 150 Aircraft Noise and Land Use Compatibility Study, Sea-Tac Airport's Part 150 Study is a planning effort designed to address and mitigate the effects of aircraft noise within the airport communities.

### THE PUBLIC PROCESS

The Port is committed to a thorough and accessible public process throughout the Part 150 Study that ensures there are multiple avenues for involvement and public comment. The Port has designed a process that is inclusive and will effectively engage everyone who wants to be involved. The Port has done this by providing a variety of methods of engagement tailored for those with different interest levels. Records of all public sessions and the input received will be kept and factored into the study.

- **Public Workshops** -- A series of public workshops, the key public outreach mechanism utilized by the Port, will be held throughout the Part 150 Study process. Each workshop will be built around the study element that the Part 150 Study is currently engaged in. Open to all, each workshop will include smaller breakout sessions, where members of the public, engaging directly with facilitators, can provide input, ask questions and offer recommendations in a more personal setting.

*FAA Public Participation Requirement for a Part 150 Study – "Prior to and during the development of a program, and prior to submission of the resulting draft program to the FAA, the airport operator shall afford adequate opportunity for the active and direct participation of the States, public agencies and planning agencies in the areas surrounding the airport, aeronautical users of the airport, the airport operator, and the general public to submit their views, data, and comments on the formulation and adequacy of that program. Prior to submitting the program to the FAA, the airport operator shall also provide notice and the opportunity for a public hearing."*

- **Special Meetings** -- For city councils, community groups or any organization that requests a briefing, Part 150 Study team representatives will visit those entities directly to update their members on the study and to listen to their ideas and recommendations. These special meetings will be particularly helpful in addressing localized issues or concerns.
- **Highline Forum** – At the Forum's bimonthly meetings, the membership will receive regular briefings and have the opportunity to engage directly with Port staff on the Part 150 Study. The Highline Forum is comprised of elected representatives from the airport cities, the Highline School District and the Port of Seattle.

- **Dedicated Website** -- A dedicated, public Part 150 Study website has been established as the single location for all documentation connected to the study.  
<http://www.airportsites.net/SEA-part150/default.htm>.
- **Public Hearing** -- A Federal Aviation Administration (FAA) required public hearing and comment period will be held near the end of the study, approximately 30 days after the Draft Part 150 is published. All comments will be responded to in the final Part 150 Study.
- **Technical Review Committee** -- A Technical Review Committee (TRC), comprised of land use planners from the surrounding communities and aviation and airline representatives, will meet throughout the process to provide expertise in their fields, review data and reports and offer feedback on all technical documents related to the study.
- **Port Commission briefings** - The Port of Seattle Commission will receive briefings on the Part 150 Study's progress on a quarterly basis. Public testimony is always taken at Port Commission meetings.

#### **PART 150 TIMEFRAME**

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A Part 150 Study typically takes up to three years to complete. However, the Port's goal is to complete the current study, which began in November 2009, and submit it to the FAA and Port of Seattle Commission for approval within two years. The review period by the FAA can take up to six months. These approvals are a requirement before the Port can spend its own money or receive federal funds for noise mitigation projects or activities.

# Current Part 150 - Schedule

