

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

**COMMISSION AGENDA –STAFF BRIEFING**

**Item No.** 7b  
**Date of Meeting** February 28, 2012

**DATE:** February 21, 2012  
**TO:** Tay Yoshitani, Chief Executive Officer  
**FROM:** Stan Shepherd, Manager Airport Noise Programs  
**SUBJECT:** Staff Briefing: Greener Skies Over Seattle

**SYNOPSIS:**

Today’s Commission Briefing will consist of an overview of the Greener Skies Initiative presented by David Suomi, the Deputy Regional Administrator of the Federal Aviation Administration’s (FAA) Northwest Region. This initiative consists of implementing satellite-based technology to improve aircraft flight procedures into Sea-Tac Airport. When implemented, the new procedures will reduce carbon emissions and noise in the Puget Sound Region, and reduce air-to-ground communications and the possibility of “hear back / read back” errors.

**BACKGROUND:**

In the summer of 2008, the Port of Seattle Noise Office met with Alaska Airlines to discuss ways to further reduce noise and emissions through improved flight approaches at Sea-Tac Airport. Alaska Airlines is a national leader in pioneering improved navigation technology, and a logical partnership formed with the Port to explore options for decreasing the environmental impact of arriving aircraft. The Boeing Company, another worldwide leader in advanced aircraft navigation technology, joined the efforts with the Port and Alaska Airlines, forming a strong team of industry experts to meet this challenge.

Much of the work accomplished by Alaska Airlines has been in the form of introducing Required Navigational Performance (RNP) flight procedures into remote Alaska airports with limited land based navigation technology. RNP is a satellite based technology onboard aircraft that allows for very specific flight routes including altitude, speed and time. The technology provides benefits of more direct routing and the elimination of fuel consuming step down approaches, replaced instead with Optimized Profile Descents (OPDs). Sea-Tac is an ideal location to pursue RNP technology because it has the highest percentage of advanced instrument equipped aircraft and trained pilots in the nation. In addition, the project has broad Congressional support.

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From 2009 through 2010, the team focused on understanding the implementation of RNP within the Puget Sound's complex airspace. Many difficulties regarding implementation were identified during that timeframe. Alaska Airlines expended significant time and resources researching this effort by volunteering three different demonstration flights. Various FAA and other Greener Skies team members were onboard the aircraft observing the RNP flight procedures. Aircraft performance data and communications information was captured during these flights for further evaluation.

In June 2010, the FAA NextGen (Next Generation Air Transportation System) Management Board adopted the Greener Skies Initiative as an official project. (NextGen is the FAA's plan to modernize the National Airspace System (NAS) through 2025.) The initiative will increase airspace capacity and efficiency while improving safety and reducing environmental impacts. This is accomplished by replacing ground-based radar with new satellite-based equipment and advanced aircraft navigation capabilities. The original team of Alaska Airlines, the Port, and Boeing remain actively involved in the project in an advisory capacity.

The Greener Skies Initiative is serving as a blueprint for NextGen RNP technology throughout the country. To fully integrate into the Seattle area's complex airspace, Greener Skies procedures will require significant rule changes to be made by the FAA. To accomplish this revision process, the FAA has separated the project into two specific initiatives:

- Initiative One - Development of Sea-Tac specific arrival routes and procedures.
- Initiative Two - Identification and resolution of current policies, procedures and regulations necessary to derive the full value of Initiative One procedures. Initiative Two work has implications for successful implementation of similar approaches nationwide.

During 2012, work will continue on the environmental review process initiated in the autumn of 2011 and the FAA expects to allow limited testing on revenue flights under narrowly defined conditions. Absent a fatal flaw identified during the environmental review or initial flights, the project is anticipated to conclude in the spring of 2013, with published RNP approaches and procedures for arrivals into Sea-Tac. Implementation will be phased in, as controllers are trained and become familiar with the new routes. Additional work will continue at the national level during Initiative Two, to ensure full NAS integration of RNP.

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

- PowerPoint Presentation