

PORT OF SEATTLE
MEMORANDUM

COMMISSION AGENDA
STAFF BRIEFING

Item No. 7a
Date of Meeting April 28, 2015

DATE: April 21, 2015
TO: Ted Fick, Chief Executive Officer
FROM: Elizabeth Leavitt, Director, Aviation Planning and Environmental
SUBJECT: Sustainable Airport Master Plan (SAMP) Planning Update

SYNOPSIS

This briefing provides an update on SAMP planning. The Sustainable Airport Master Plan (SAMP) will provide a facilities plan to guide cohesive development both in the near- and long-term.

With the draft airport activity forecast complete, the SAMP team developed and assessed several terminal expansion concepts to meet long-term gate requirements. A few of the better preliminary terminal concepts were presented to the Commission in January of 2015. This briefing includes a recommended gate expansion concept and a preliminary evaluation of airfield capacity. The SAMP team is currently in the initial stages of airfield simulation modeling and is beginning to develop a plan for phased gate expansion. Over the next six to seven months, the SAMP team will:

- 1) Conduct detailed simulation modeling to assess the capacity of the existing airfield system and potential future capacity with identified capital improvements,
- 2) Refine the recommended terminal expansion concept,
- 3) Determine landside and airport/airline support facility requirements to support the refined terminal expansion concept and
- 4) Develop a phased plan for implementation of the entire SAMP capital program.

With the recent surge in flight activity, all existing gates are currently utilized at peak times of the day. The SAMP forecasts solid growth and Port staff anticipates the need to push some flights to remote hardstands next year. The demand for hardstand operations will increase significantly in the near-term as gates are taken out of service due to construction associated with the International Arrivals Facility. While the NorthSTAR program will expand gate capacity at the North Satellite in 2020, accommodating increasing aircraft operations prior to the opening of additional gates, beyond the NorthSTAR program, will be a considerable challenge.

Preliminary airfield capacity analysis indicates that throughput of the three runway system is currently reaching capacity in peak periods and average annual delay per aircraft operation may reach a maximum acceptable delay range of 15 to 20 minutes within 10 to 15 years without improvements. Twenty minutes of average annual delay is the highest ever experienced at any airport in the United States. The SAMP planning team is beginning detailed simulation analysis to confirm the early findings and assess the benefit of potential airfield taxiway improvements to increase capacity.

COMMISSION AGENDA

Ted Fick, Chief Executive Officer

April 21, 2015

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BACKGROUND

In September 2012, the Port Commission approved scope and budget of \$6,000,000 for the creation of a Sustainable Airport Master Plan (SAMP). Since October of 2014, staff has briefed the Commission three times on SAMP planning progress, including: forecast results and challenges associated with planning to accommodate forecast activity; and preliminary options for terminal, landside and cargo development.

The master plan process provides an opportunity to take a comprehensive assessment of facilities capacity and forecasted demand over 5-, 10-, and 20-year timeframes. Airport master plans are typically prepared approximately every 10 years. The last formal master plan for Sea-Tac was developed in the mid-1990s and was focused primarily on the third runway.

The primary objective of an airport master plan is to provide a roadmap for the phased redevelopment/expansion of facilities; maintaining a balance of capacity in all key functional areas. Overall airport system capacity is limited by functional areas with the least capacity. Terminal and landside facilities are generally balanced to the fixed capacity of the airfield. Through alternatives development and evaluation, the SAMP will culminate in a capital improvement program and plan of finance that will deliver cost effective projects to remove capacity pinch points, increase efficiency and provide a high level of service to airport customers.

ATTACHMENTS TO THIS BRIEFING

- PowerPoint presentation

PREVIOUS COMMISSION ACTIONS OR BRIEFINGS

- March 24, 2015 - Commission Briefing: "Briefing on Sea-Tac Cargo as part of the Sustainable Airport Master Plan"
- January 27, 2015 - Commission Briefing: "Sustainable Airport Master Plan (SAMP) Planning Update"
- October 7, 2014 - Commission Briefing: "Sustainable Airport Master Plan (SAMP) Forecast and Facilities Challenges"
- February 28, 2014 - Commission authorization to amend the existing Sustainable Airport Master Plan (SAMP) service agreement with Leigh Fisher Associates for IAF-related planning tasks for an increase of \$3,650,000 and a new total contract amount of \$9,650,000
- September 5, 2012 - Commission authorization for SAMP development and to advertise and execute a contract for consulting services for the SAMP, with a total estimated value of \$6 million
- August 14, 2012 - Commission deferred consideration of a request to approve funding for the Sustainable Airport Master Plan (SAMP)
- June 27, 2012 - Commission Briefing: "Terminal Development Challenges"