City of
Santa Monica

Office of the City Manager – Airport Affairs
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City of Santa Monica Airport
Air Quality Study
Scope of Work

Introduction

Santa Monica Airport (SMO) over the last century has grown from a dirt airstrip designed for biplanes to a busy general aviation airport with more than 80,000 landings and take-offs last year. For the past three decades, the City government has sought to rein in the increasingly severe noise, health and safety impacts on surrounding neighborhoods. After protracted litigation, the City of Santa Monica and the Federal government entered into a landmark Consent Decree to authorize permanent closure of SMO at the end of 2028. The Consent Decree also authorized the City to shorten the Santa Monica Airport's runway from approximately 5,000 feet to an operational runway length of 3,500 feet, which is expected to significantly curb large turbine aircraft operations. Runway shortening construction is scheduled to be complete in January 2018. The runway shortening project provides a rare opportunity to conduct a follow-up study to one the South Coast Air Quality Management District (AQMD) conducted and the results of which were provided in its report dated August, 2010 (Attachment A). A supplemental study was also conducted by AQMD, when the airport was closed for a few days. The results for that study were provided in the AQMD report dated April 2011 (Attachment B). This scheduled closure provided AQMD a rare opportunity to take measurements before, during and after the brief closure. Similarly, the upcoming work to shorten the runway offers a unique opportunity to conduct a follow-up to the AQMD study of air quality impacts at SMO, with measurements before, during, and after the scheduled closure.

The purpose of this study is to update the air quality study conducted by AQMD, establishing a baseline immediately before the runway shortening project begins, during the full airport closure, and after the project is completed once operations resume.

Runway Shortening Project

The runway shortening creates more than 700′ feet of excess pavement on each end of the runway. The Santa Monica City Council at its September 26, 2017 meeting voted unanimously to remove all unused pavement outside the Runway Safety Area (RSA) and hydro-seed. The Council also directed staff to further study how to best stabilize the pavement within the RSA consistent with safety needs and the requirements of the Consent Decree. The removal of the unused pavement will occur at the end of calendar year 2018.

Runway Shortening Project Schedule

- October 23rd to December, 2017 – preliminary work will be completed at night from 9 p.m. to 7 a.m. Monday thru Friday. During those hours, the runway will be closed to all aircraft operations. We propose this as a window for obtaining baseline data.

- January 2018 – the airport will be shut down 24 hours a day for ten consecutive days to all air traffic while the runway is shortened. This is an ideal window to obtain data for conditions in which there is no aircraft operations.

- After the closure – the new airport configuration will limit the fleet mix of turbine aircraft operations by frequency of take-offs and landings. We are interested in seeing if there is a change in air quality from the baseline data collected and how this change in the turbine aircraft fleet mix impacts the baseline data collected.

Figure A below depicts the abandoned pavement that is potentially eligible for removal, and shows its relation to the Runway Protection Zone (RPZ) and Runway Safety Area (RSA). The RPZ is an area at ground level beyond the ends of the runway to enhance the safety and protection of people and property on the ground. For airports in urban areas, due to historical circumstances, the RPZ often extends beyond the airport boundary and into the surrounding neighborhood. The RSA is the surface immediately at each runway end prepared in a manner that reduces risk of damage to airplanes in the event of an undershoot, overshoot or excursion from the runway. At SMO, the RSA extends 300 feet beyond the active runway.

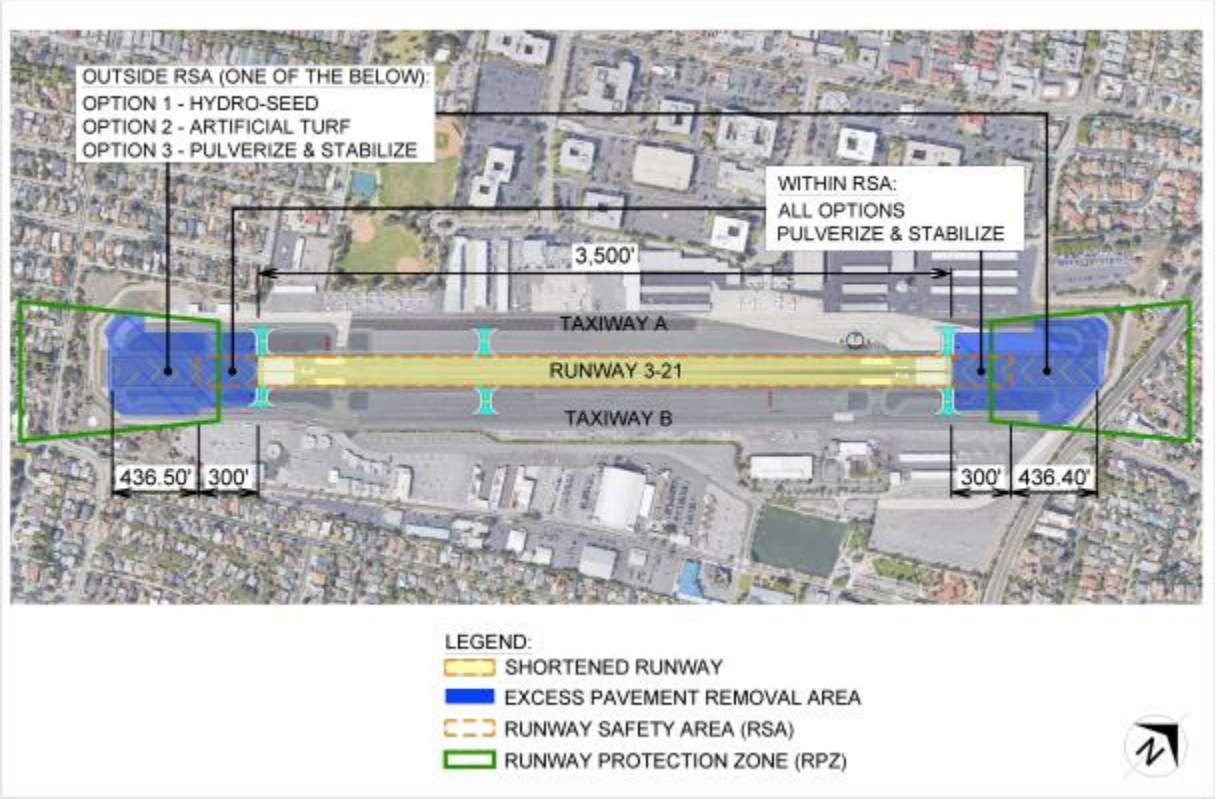

Figure A - Abandoned pavement removal options in relation to the RSA and RPZ

Project Tasks

- Measurements – At minimum, measure ultrafine particle concentrations and black carbons. Proposal can include measurements of other pollutants such as NOx and volatile organic compounds.
- Three field campaigns – Plan approximately five weeks of measurements divided into three field campaigns – before airport closure, during closure for construction of the new airstrip configuration, and after airport reopening once (new) normal operations have resumed.
- Data Analysis
- Interpretation of Results – including comparison to AQMD studies.
- Final Report
- Presentation