LAX Community Noise Roundtable

Southern California Metroplex
Environmental Assessment

May 13, 2015
The Federal Aviation Administration (FAA) has been working with aircraft operators for several years to improve efficiency and reduce complexity in the Southern California airspace.

This effort, known as the Southern California Metroplex, is a part of the FAA’s NextGen initiative to improve airspace efficiency throughout the United States by utilizing satellite-based navigation technology.

The Southern California Metroplex process will result in new approach and departure procedures that may change where and how aircraft fly over the Los Angeles Basin.
• On September 24, 2012, the LAX Community Noise Roundtable sent a letter to the FAA recommending noise abatement measures for FAA to consider in the Metroplex process.

• On January 8, 2014, the FAA sent a letter to the Roundtable indicating that the Roundtable’s recommendations were forwarded to the Southern California Metroplex Design and Implementation team ‘“for consideration during the procedure design process.”

• The FAA’s letter also indicated that in order to implement the procedures more quickly, the designs would remain within the thresholds of an Environmental Assessment (EA), rather than trigger a lengthy Environmental Impact Statement (EIS).
The FAA’s approach to public outreach and receiving public input for the Southern California Metroplex process is consistent with other Metroplex efforts throughout the country.

The FAA will release the proposed arrival and departure routes, and receive public comment during the Draft Southern California Metroplex EA process.

The Draft Southern California Metroplex EA will evaluate and disclose any potential noise impacts resulting from the proposed Metroplex procedures based on NEPA requirements.
• The Draft EA is scheduled to be released on June 10, 2015

• Following that, the FAA will hold public meetings in the Southern California to describe the Metroplex process and explain the initial findings of the Draft EA

• The length of the public comment period will be at least 30 days
During the 30-day (minimum) public comment period, interested members of the public may:

- Download and review the Draft EA

- Attend at least one of the public workshops to learn more about the proposed airspace changes and to speak with the FAA directly about the Metroplex process

- Submit written comments regarding the aspects of the Metroplex process that concern them
The Metroplex procedures may include:

- Optimized Profile Descent (OPD)
  - Uses flight-idle throttle settings and keeps the aircraft “clean” until several miles from touchdown

- Performance Based Navigation (PBN), Required Navigation Performance (RNP), and Area Navigation (RNAV) departures and approaches
  - Reduces distance flown, increases precision and repeatability, and reduces pilot/controller communications
Optimized Profile Descent Compared to a Conventional Descent

Source: Final Environmental Assessment for Northern California Optimization of Airspace and Procedures in the Metroplex, July 2014
Depictions of Conventional, RNAV, and RNP Procedures

Exhibit 1-5  Navigational Comparison – Conventional/RNAV/RNP

Current Ground NAVAIDs  RNAV  RNP

Limited Design Flexibility  Increased Airspace Efficiency  Highly Optimized Use of Airspace

Legend

- Navigational Aid
- Aircraft
- Route
- Route Deviations
- Airport
- Waypoint

Notes:
NAVAID – navigational aid
RNAV – Area Navigation


Source: Final Environmental Assessment for Northern California Optimization of Airspace and Procedures in the Metroplex, July 2014
Example of a Proposed Departure Procedure at SFO

Source: Final Environmental Assessment for Northern California Optimization of Airspace and Procedures in the Metroplex, July 2014
Example of One Proposed Departure Procedure Replacing Two Existing Procedures in Northern California

Source: Final Environmental Assessment for Northern California Optimization of Airspace and Procedures in the Metroplex, July 2014
Example of Modeled Flight Tracks in Northern California

Source: Final Environmental Assessment for Northern California Optimization of Airspace and Procedures in the Metroplex, July 2014
Because the airspace changes are expected to occur above 3,000 feet mean sea level, aircraft noise exposure will likely be presented in a grid format using census blocks and summarized in tables.

Changes in aircraft noise exposure will be evaluated in three distinct Day-Night Average Sound Level (DNL) zones as follows:

- DNL 65 and greater
- DNL 60 to 65
- DNL 45 to 60
### Table 1: Criteria for Determining Impact of Changes in Aircraft Noise

<table>
<thead>
<tr>
<th>DNL Noise Exposure Level</th>
<th>Increase in DNL with Proposed Action</th>
<th>Aircraft Noise Exposure Change Consideration</th>
</tr>
</thead>
<tbody>
<tr>
<td>DNL 65 and higher</td>
<td>DNL 1.5 dB or higher ¹/</td>
<td>Exceeds Threshold of Significance</td>
</tr>
<tr>
<td>DNL 60 to 65</td>
<td>DNL 3.0 dB or higher ²/</td>
<td>Information Disclosed When Evaluating Air Traffic Actions</td>
</tr>
<tr>
<td>DNL 45 to 60</td>
<td>DNL 5.0 dB or greater ³/</td>
<td>Information Disclosed When Evaluating Air Traffic Actions</td>
</tr>
</tbody>
</table>

**Notes:**


3/ Source FAA Order 1050.1E, Appendix A, Paragraph 14.5e.

Prepared By: ATAC Corporation, November 2013.
• Increases of 1.5 dB or greater over noise sensitive land uses exposed to DNL 65 and greater are considered significant per guidance in the FAA’s environmental orders and would trigger further environmental review.

• Increases in aircraft noise exposure in the DNL 45 to 60 and DNL 60 to 65 zones will be disclosed in the Draft Metroplex EA, but do not exceed the NEPA significance threshold.

• As previously stated, in order to avoid preparing the more costly and time-consuming EIS, the Metroplex process will eliminate procedures that result in increases of 1.5 dB or greater within the DNL 65 zone.
Example of Noise Exposure by Census Block in Northern California

Source: Final Environmental Assessment for Northern California Optimization of Airspace and Procedures in the Metroplex, July 2014
Example of a Table Showing the Change in Population Exposed to Aircraft Noise in Northern California

<table>
<thead>
<tr>
<th>DNL Noise Exposure Level Under the Proposed Action</th>
<th>Increase in DNL with the Proposed Action</th>
<th>Population Exposed to Noise that Exceeds the Threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>DNL 65 dB and higher</td>
<td>DNL 1.5 dB or greater</td>
<td>0</td>
</tr>
<tr>
<td>DNL 60 dB to 65 dB</td>
<td>DNL 3.0 dB or greater</td>
<td>0</td>
</tr>
<tr>
<td>DNL 45 dB to 60 dB</td>
<td>DNL 5.0 dB or greater</td>
<td>0</td>
</tr>
</tbody>
</table>

Source: 2010 U.S. Census (population centroid data), August 2012; ATAC Corporation, August 2013 (NIRS modeling results).

Prepared By: ATAC Corporation, November 2013.
Completion and Publication of the Final Metroplex EA

• After the public comment period closes, the FAA will consider and collectively respond to all of the public comments received on the Draft EA in the Final Metroplex EA

• The Final EA will be published on the Metroplex website

• The FAA will prepare a Finding of No Significant Impact (FONSI) and Record of Decision (ROD)

• Notice of the FONSI/ROD will be published in the Federal Register
After the FONSI/ROD is issued, the FAA will undertake the work required to implement the Proposed Action which may include, but is not limited to, the following:

- Training air traffic controllers on the new procedures
- Publishing the new approach and departure procedures

Aircraft operators will:

- Train flight crews and update their Flight Management Systems with the new procedures

This process may take several months before the new procedures are implemented
Once the new procedures are implemented, the community may notice:

- Nothing at all
- Decreased aircraft overflights and noise levels
- Increased aircraft overflights and noise levels
- Concentrated flight tracks over a narrow area
- Increased aircraft altitudes
- Decreased aircraft altitudes
- Aircraft where they have not flown previously

The exact effects will depend on the types of changes the FAA plans to make and where those changes are made.
Examples of Community Reaction to Airspace Changes

- Community reaction to FAA’s implementation of RNAV/RNP procedures has been mixed:
  - Boston RNAV Procedures
  - Denver Airspace Redesign
  - Houston Metroplex
  - New York Airspace Redesign
  - Northern California Metroplex
  - Phoenix RNAV Procedures
  - Portland RNP Approach
  - Seattle Greener Skies
Example of Radar Flight Tracks Before and After Implementation at Phoenix Sky Harbor International Airport

Before & After September 18, 2014 Flight Path Arrivals from the West

Source: City of Phoenix
Example of Radar Flight Tracks Before and After Implementation at Phoenix Sky Harbor International Airport.

Before & After September 18, 2014 Flight Departures to the West

Purple = Before
Blue = After

Source: City of Phoenix
SUMMARY

• The Southern California Metroplex Draft EA is scheduled to be available June 10, 2015

• The 30-day (minimum) public comment period begins with the release of the EA

• The interested public should provide written comments on the Draft EA before the public comment period closes

• FAA will publish the FONSI/ROD in the Federal Register

• Implementation of the proposed procedures could take several months
Questions?