Final Update of the LAX Part 161 Application

March 11, 2015

LAX/Community Noise Roundtable
Overview

- FAA’s FAR Part 161 Regulation and LAWA’s proposed Use Restriction
- The noise problem and LAWA’s approach to address it
- Study findings
- Project schedule
- FAA’s interim determinations and ultimate acceptance of the Application
- FAA’s final determination disapproving the proposed restriction
In 1990, Congress passed the Airport Noise and Capacity Act (ANCA), which provided for a phase-out of Stage 2 aircraft greater than 75,000 pounds by January 1, 2000.

In return for the Stage 2 Phase-out, ANCA established a process that made it very difficult for airport proprietors to enact new aircraft noise and access restrictions.

The process is known as the Federal Aviation Regulation (FAR) Part 161 – “Notice and Approval of Airport Noise and Access Restrictions.”

FAR Part 161 is the process that airport proprietors must follow and demonstrate that the benefits of a proposed restriction outweigh the costs of the restriction in order for FAA to consider approving the restriction.

In the 25 years since ANCA was enacted, no application for a noise and access restriction at an air carrier airport has ever been approved by FAA. Only one application -- for a Stage 2 aircraft noise and access restriction at a general aviation airport (Naples) – has been approved.
From the LAX Part 161 Application:

“The City of Los Angeles (the “City”) has sought for many years to reduce the noise impacts of night-time aircraft operations at Los Angeles International Airport (“LAX”). One target of the City’s noise-reduction efforts has been “non-conforming operations” – departures to the east when LAX is in Over-Ocean or Westerly Operations at night. These non-conforming operations do not occur often, but when they do occur, they are likely, according to established estimation procedures, to cause thousands of awakenings in communities near LAX. Consistent with its commitments to the local community, the City has attempted to reduce the number of non-conforming operations through a variety of voluntary programs. These efforts have not been completely successful; various air carriers continue, from time to time, to engage in non-conforming operations.”
Noise Problem – Non-Conforming East Departures

- Aircraft departing to the east during Over-Ocean and Westerly Operations between midnight and 6:30 AM cause disturbances to communities east and south of airport where no other activity is occurring.

- People report being awakened by these non-conforming departures.

- Average of 65 “non-conforming” flights per year.

- Though these single events are very noticeable, they create very minimal effects on annual CNEL contour.
LAWA’s Proposed Use Restriction

From the LAX Part 161 Application:

“This application seeks approval from the Federal Aviation Administration (the “FAA”) for the City to adopt a new ordinance that would require all aircraft operators to comply with prevailing flows whenever LAX is in Over-Ocean or Westerly Operations from midnight to 6:30 a.m. This runway use restriction, if approved by the FAA, would eliminate non-conforming operations and the awakenings they are estimated to cause.”
LAWA’s Proposed Use Restriction

- Prohibit easterly departures (with exemptions for emergency operations, etc.) between midnight and 6:30 a.m. when the Airport is in Over Ocean Operations, or when it remains in Westerly Operations

- If restriction were imposed, an aircraft operator would need to:
  - reduce aircraft weight by offloading passengers or cargo to allow a westbound departure, or
  - delay the flight until favorable wind conditions exist, or
  - continue the east departure as planned and pay a penalty

- The proposed penalties were:
  - $2,500 fine for the first violation;
  - $5,000 fine for a second violation within a year of the first violation;
  - $10,000 fine for a third (and all subsequent violations) within three years of the first violation.
Approach to Benefits Analysis

- Determine the 65 CNEL Airport Noise Study Area for 2013 and 2018 using existing and forecast operations without the restriction, then again assuming the restriction is in place.

- Assess changes in CNEL, population, and housing unit counts

- Provide supplemental information on noise complaints of non-conforming flights

- Estimate sleep disturbance using a procedure newly adopted by the Federal Interagency Committee on Aviation Noise (FICAN) that relates noise and awakenings
Changes in 65 CNEL Contour for 2013
Changes in 65 CNEL Contour for 2018
Historic and Projected Complaints by Contour Interval

<table>
<thead>
<tr>
<th>CNEL (dB)</th>
<th>Noise Complaints by CNEL</th>
<th>2013</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 65</td>
<td></td>
<td>531</td>
<td>530</td>
</tr>
<tr>
<td>65 - 70</td>
<td></td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>70 - 75</td>
<td></td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>&gt;75</td>
<td></td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total &gt; 65</td>
<td></td>
<td>10</td>
<td>11</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>541</td>
<td>541</td>
</tr>
</tbody>
</table>

Note: An additional 50 complaints were not included in above numbers due to lack of corresponding addresses for mapping purposes.
Decreases and Increases in the Probability of Awakening
## Net Decreases in Awakenings

<table>
<thead>
<tr>
<th>CNEL (SQ) (dB)</th>
<th>Sleep Awakenings by Population</th>
<th>Sleep Awakenings by Housing Units</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Proposed Restriction</td>
<td>Status Quo</td>
</tr>
<tr>
<td>&lt; 65</td>
<td>56,890</td>
<td>57,351</td>
</tr>
<tr>
<td>65 to &lt;70</td>
<td>15,879</td>
<td>15,913</td>
</tr>
<tr>
<td>70 to &lt;75</td>
<td>7,136</td>
<td>7,148</td>
</tr>
<tr>
<td>Total ≥ 65</td>
<td>23,014</td>
<td>23,061</td>
</tr>
<tr>
<td>Total</td>
<td>79,905</td>
<td>80,412</td>
</tr>
</tbody>
</table>

Note: May not add or subtract exactly due to rounding. Population and housing counts determined using census block centroids (See Appendix K for a description of the complete process).
Approach to Cost Analysis

- Determine air carriers responsible for non-conforming flights

- Interview Chief Pilots and other representatives of most frequent operators of non-conforming flights to identify:
  - Reasons for easterly departures
  - What they would do if a restriction were implemented

- Estimate costs of increased crew delays, changes in fuel burn, and off-loading of passengers or cargo to permit Over Ocean Operation
# Part 161 Project Schedule

<table>
<thead>
<tr>
<th>Date</th>
<th>Milestone</th>
</tr>
</thead>
<tbody>
<tr>
<td>March 2005</td>
<td>Awarded contract to HMMH to conduct the Part 161 Study</td>
</tr>
<tr>
<td>2005 – 2011</td>
<td>Amended contract to extend the time necessary to complete the study</td>
</tr>
<tr>
<td>December 2011</td>
<td>Prepared text of Draft Ordinance</td>
</tr>
<tr>
<td>August – September 2012</td>
<td>Finalized fleet mix forecasts; Completed sleep disturbance and benefit/cost analyses</td>
</tr>
<tr>
<td>October - December 2012</td>
<td>Completed Draft Part 161 study and Application; Conducted a public review process</td>
</tr>
<tr>
<td>January 2013</td>
<td>Submitted application to FAA for determination</td>
</tr>
<tr>
<td>2013 -2014</td>
<td>FAA determined application was incomplete on two occasions. LAWA submitted revised applications to ensure FAA’s acceptance.</td>
</tr>
</tbody>
</table>
FAA Initially Found Application Incomplete because:

- Application did not include maps of existing and future sound insulated housing units. (The Application assumed sound insulation would not eliminate awakenings; the Revised Application added the map anyway)

- The Airport boundary did not accurately reflect new projects such as the approved Runway Safety Area for 7L/25R. (The Revised Application confirmed that the boundary was accurate because the project would not be complete by 2018)

- The modeled flight tracks of non-conforming flights were not individually labeled. (The Revised Application added the labels)

- The cost analysis did not adequately account for the disruption of passengers. (The Revised Application added costs of passenger disruption)

- The Application did not state whether LAWA would accept a partial acceptance of the Restriction. (The Revised Application added a statement that LAWA would not accept a partial acceptance)
Primary Reason the Application was Incomplete:

- The FAA does not permit the inclusion of supplemental information regarding complaints or sleep awakenings beyond the 65 CNEL Airport Noise Study Area. (The Revised Application eliminated complaints and sleep awakenings at levels less than 65 CNEL, significantly reducing the noise benefits of the proposed Regulation)

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- The Final Application was submitted with these and other changes on May 12, 2014, and found to be administratively complete on June 10, 2014
**FAA’s Decision Regarding the Completed Application**

Statutory conditions that must be met for a Stage 3 Restriction, and FAA’s determination on whether each condition was satisfied

<table>
<thead>
<tr>
<th>Condition</th>
<th>Description</th>
<th>Satisfy Condition?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The proposed restriction is reasonable, nonarbitrary, and nondiscriminatory</td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td>The proposed restriction would not create an unreasonable burden on interstate or foreign commerce</td>
<td>No</td>
</tr>
<tr>
<td>3</td>
<td>The proposed restriction would maintain safe and efficient use of navigable airspace</td>
<td>Yes</td>
</tr>
<tr>
<td>4</td>
<td>The proposed restriction would not conflict with any existing federal statute or regulation</td>
<td>No</td>
</tr>
<tr>
<td>5</td>
<td>The applicant has provided adequate opportunity for public comment on the proposed restriction</td>
<td>Yes</td>
</tr>
<tr>
<td>6</td>
<td>The proposed restriction does not create an unreasonable burden on the national aviation system.</td>
<td>Yes</td>
</tr>
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</table>
The FAA said:

• LAWA arbitrarily defined the noise problem as one of nighttime noise associated with easterly non-conforming departures. The Proposed Restriction would provide an “extremely small noise relief” within the Airport Noise Study Area, while imposing “a disproportionate negative effect on nighttime aircraft departures”.

• LAWA has not provided substantial evidence that the Proposed Restriction can relieve LAX’s noise problem. FAA still relies on DNL or CNEL (not awakenings or complaints) to make determinations of noise impact.

• LAWA has not provided substantial evidence that there are no feasible or cost-effective non-restrictive measures to address the noise problem such as improving voluntary compliance with Over-Ocean Operations.
The FAA said:

- Whether a carrier chooses to off-load a heavily loaded aircraft to depart to the west or pay a penalty for a non-conforming flight to the east, either decision potentially reduces air carrier profitability.

- FAA’s analyses of costs suggest that, as long as paying fines is an option, some carriers would likely continue to operate non-conforming departures, thus reducing any noise benefit from those operations.

- LAWA’s cost-benefit analysis does not demonstrate that the benefits of the Proposed Restriction have a reasonable chance of exceeding the potential cost of its adverse effects, or that the costs do not create an undue burden on interstate and foreign commerce.
The FAA said:

- LAWA’s Proposed Restriction could establish a conflict with 14 CFR 91.3(a), which states that the Pilot in Command (PIC) of an aircraft has the final authority as to the operation of that aircraft, including “safety through aggressive risk management”.

- FAA is concerned that the Proposed Restriction “reaches into the cockpit” and may interfere with safety parameters affecting critical departure decisions. The Application fails to adequately demonstrate the absence of a conflict with PIC authority and safety concerns.
FAA’s Final Determination of the Proposed Restriction

- FAA requires a proposed restriction affecting Stage 3 aircraft operations must meet all six statutory conditions supported by substantial evidence, in order to approve a proposed restriction.

- FAA determined that the Final Application did not meet three of the six conditions.

- The restriction was disapproved.