A special meeting of the LAX/Community Noise Round Table was held on June 8<sup>th</sup> to present the North Downwind Arrival Study Results. The study was funded by LAWA in order to determine whether there is an explanation for the numerous complaints they and the government officials have received regarding a change in aircraft noise, primarily since mid-October 2015. The study was also undertaken in response to the FAA's letter to Los Angeles City Councilman Mike Bonin, stating that nothing has changed. The source of the data reviewed for the study was from the Airport and Noise Management System at LAWA, which pulls in data from every aircraft via radar.

Steve Alverson, who is the facilitator of the Round Table Meetings, was head of the team in charge of the study.

### **Background Information**

- 1. In October 2015, Residents north and south of the North Downwind Arrival course "perceived aircraft are lower, louder and more frequent;"
- 2. In November 2015, LAWA examined flights over Pacific Palisades and found no obvious changes in aircraft altitudes and flight tract locations; and
- 3. In January 2016, the FAA SoCal TRACON Staff Present on the North Downwind Arrivals to the LAX Roundtable. It found no obvious changes in aircraft flight track locations.
- 4. In March 2016, LAWA authorized ESA (Alberson's firm) and HMMH (noise and vibration, and airport consultants) to begin the North Downwind Arrival Study;
- 5. In May 2016, The LAX Community Noise Roundtable adopts Work Program Item A-13 the North Downwind Arrival Study results.

### Study Design

- 1. Look at flight track and altitude data in new ways, focused on visual images and data trends;
- 2. Analyze the data in a fine-grain manner on a month-over-month, year-over-year basis to identify any changes;
- 3. See if the data reveal any new insights into the origin of the community's aircraft noise complaints.

# **Study Elements**

- Identify up to ten locations for data analysis (including Malibu Colony, Getty Villa and Santa Monica Canyon) – generally associated with areas of increased noise complaints or navigational fixes
- 2. Analyze data from 2010 through 2015 on monthly basis

- 3. Assess Changes in Slant Distance
- 4. Prepare Altitude Distribution Graphs
- 5. Analyze Time of Day Distribution
- 6. Prepare Flight Track Density Plots
- 7. Review Historic Arrival Procedures and Fixes
- 8. Compare Average Sound Exposure Levels
- 9. Analyze Changes in Aircraft Fleet Mix

# LAWA Staff also performed additional analyses including:

- Analyzing the timing and geographic distribution of aircraft noise complaints
- Comparing the timing of notable events (e.g. major runway closures) to the increase in aircraft noise complaints in the vicinity of the North Downwind Arrival.

The net result of this effort was a comprehensive, detailed, and thorough examination of aircraft operations, flight tracks, altitudes, fleet mix, aircraft noise levels and noise complaints related to the North Downwind Arrival from 2010 through 2015.

# **Study Results**

Numerous slides were presented, which will be available on the LAX/Community Noise Roundtable website when the summary has been finalized. Below is a brief summary of what was presented:

- 1. A review of the arrival procedures
- 2. The locations of "gates" areas where residents complained, including Santa Monica Canyon;
- 3. Increased activity aircraft operations increased 22% on the North Downwind Arrival over the past 6 years
- 4. Discussion of mix of aircraft
- 5. Recap of Sound Exposure Level Calculations
- 6. Recap of Altitudes and Slant Distances by Aircraft Categories
- 7. The chart of Slant Distances by Year for Santa Monica Canyon was a relatively flat line except for non –jet aircraft in 2015
- 8. Discussion of Flight Track Density Maps
- 9. Discussion of Altitude Distribution Graphs
  - Two changes in the nominal location of flight tracks were revealed:
- One west of the Santa Monica VOR in approximately July 2011
- One east of the Santa Monica VOR in approximately June 2014
- 10. Complainant Distribution During 2014 2015

Number of Individuals Reporting Noise Concerns along the North Arrival Route:

47 in 2014; 148 in 2015; 191 thus far in 2016.

#### Summary

- 1. There has been a 22% increase in operations from 2010 2015 including all aircraft types except for non-jet aircraft
- 2. Changing Fleet
- More regional jets
- Ten-fold increase in New Large Aircraft (A380 and B748)
- Large two-engine aircraft (B777 and B787) replacing large four-engine aircraft (B747)
- Fewer non-jet aircraft
- 3. Sound Exposure Level "trends" reflect the changing fleet mix within each category
- 4. Altitudes and slant distances remain largely unchanged
- Notable temporary change in flight track density from Summer 2014-Summer 2015 in Mar Vista, Culver City, Crenshaw and Adams-Vermont gates and a slight change in the flight track centroid at Malibu Colony, Santa Monica Canyon and Getty Villa gates; however, data shows flight tracks are back to normal pattern
- 6. Various events have resulted in increased awareness of the traffic flow, and resulted in increasing numbers on individuals submitting complaints, but no one explanation for this increase.

Barry Davis, Air Traffic Manager for Southern California Tracon, stated that the FAA has seen nothing to explain the variances in summer of 2014 – summer of 2015 found by this study. He said that there has been no change in personnel, nor any changes in Air Traffic Procedure, except to maintain safety. He acknowledged that the data shows that there was a change, but he can't explain why.

[Summary prepared by Debbie Warfel, SMCCA Board Member/Contact re Aircraft Noise, deb.warfel@gmail.com, 6/9/16]