
2007 Annual Summary

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Report prepared for TAVCO by the City
of Tempe, 255 East Marigold Lane,
Tempe AZ 85281

Noise

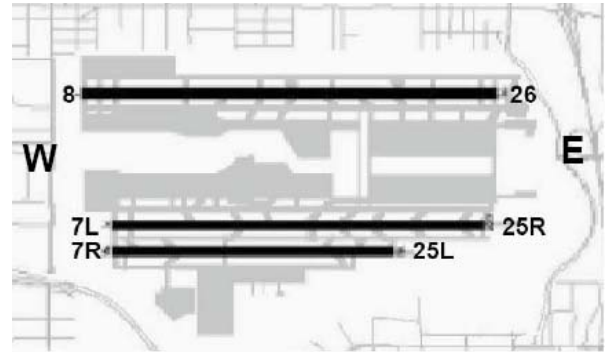
Mitigation Monitoring Summary

Hot Button Issues!

-  Most compliant airline during 2007:
United Airlines
p. 7
-  113 complaints on aircraft noise
received by Tempe in 2007 p. 4
-  Annual average aircraft noise
decreases registered in areas outside
the Sky Harbor noise exposure
contour lines, p. 5

1. Introduction

This summary is assembled for the Tempe Aviation Commission (TAVCO) to summarize annual compliance of airline operations at Phoenix Sky Harbor International Airport with noise mitigation flight procedures over the City of Tempe. TAVCO consists of 13 Tempe residents appointed by the Tempe Mayor with approval of the City Council to assist and advice on aviation noise and other issues relating to the Phoenix Sky Harbor International Airport. The City of Tempe is located directly east of the Phoenix Sky Harbor International Airport. The airport has 3 parallel runways and is owned and operated by the City of Phoenix.



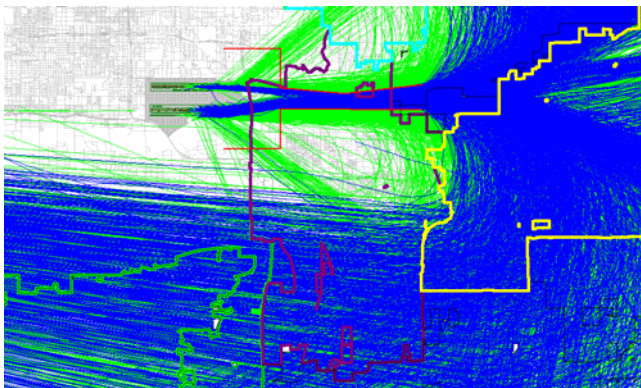
After the FAA suspended a side step visual approach procedure to Runway 25L, the following flight procedures are implemented to mitigate noise impact from large aircraft over Tempe:

- The 4-DME Standard Instrument Departure Procedure to keep all jet and large turboprop aircraft that depart to the east over the Salt River/Tempe Town Lake area before they make turns towards their route destinations.
- Equalization of all jet and large turboprop aircraft departures east and west during daytime and nighttime hours on an annual basis.

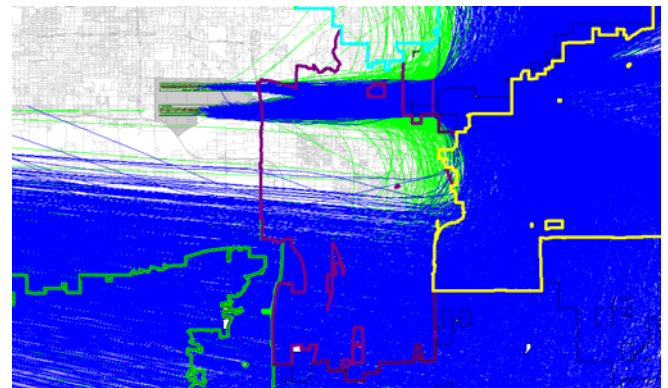
2. Departure Compliance

Compliance Rates

After the cities of Tempe and Phoenix entered into an intergovernmental agreement in 1994 on noise mitigation flight procedures, a measure was developed to identify how large aircraft complied with the 4-DME departure procedure to the east. The City of Phoenix implemented a “4-DME gate” to identify aircraft that violate the procedure. This is an imaginary line used as a filter in the Noise and Flight Track Monitoring System for the Phoenix Sky Harbor International Airport. TAVCO developed a “Corridor”, which was based on Standard Instrument Departure procedures that were in use when the intergovernmental agreement with the City of Phoenix was made.

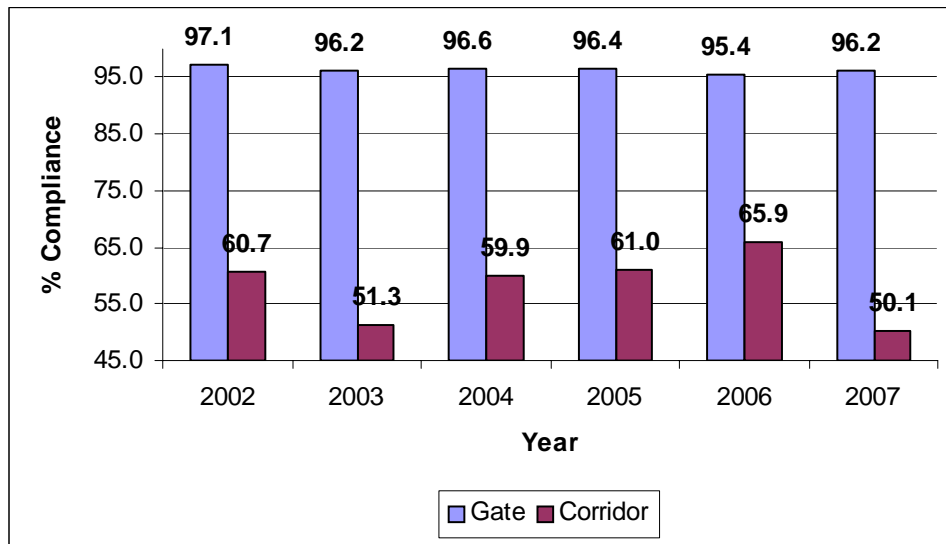


Flight tracks over a month period inside the Tempe Corridor depicted as blue tracks.



Flight tracks over the same period inside the Phoenix Gate depicted as blue tracks.

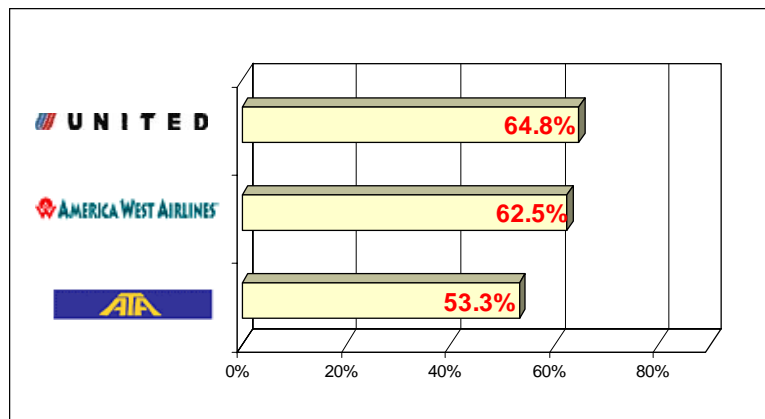
Large turboprop aircraft are not included in the depiction showing compliance with the 4-DME gate. These aircraft are routinely routed outside the 4-DME gate on approximate departure angles of 120° towards the southeast and 60° towards the northeast.



The annual average compliance rates are based on monthly numbers from the TAVCO Noise Mitigation Monitoring Reports. The November and December 2005 reports do not include exclusions of aircraft deviations because of weather done for previous months and years due to missing information that has been provided by the Phoenix Aviation Department. In 2006 cross winds of 10 knots or more have been used to filter out deviations due to weather. In 2007 the department resumed registering hours with weather conditions assumed to have negatively impacted large commercial jets' climb trajectory over Tempe. The corridor percentage includes large turboprop aircraft that routinely are routed on flight paths away from the Salt River and Tempe Town Lake area.

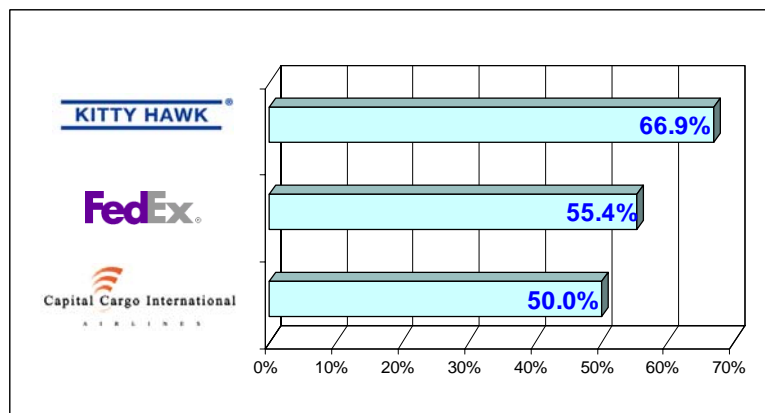
Top Airlines

Among the larger carriers United had on average best compliance with the Tempe Corridor during 2007.



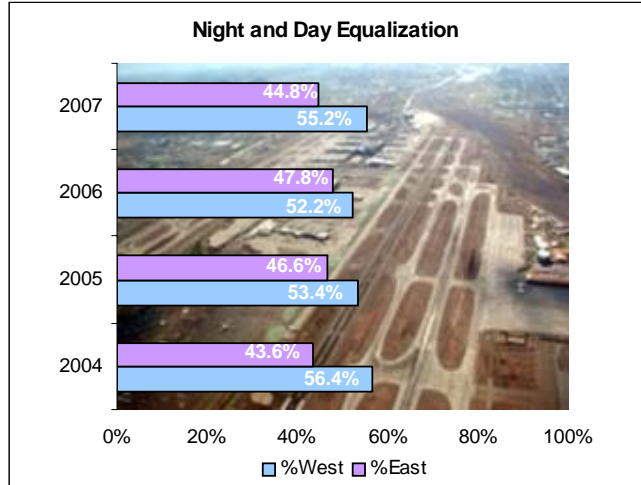
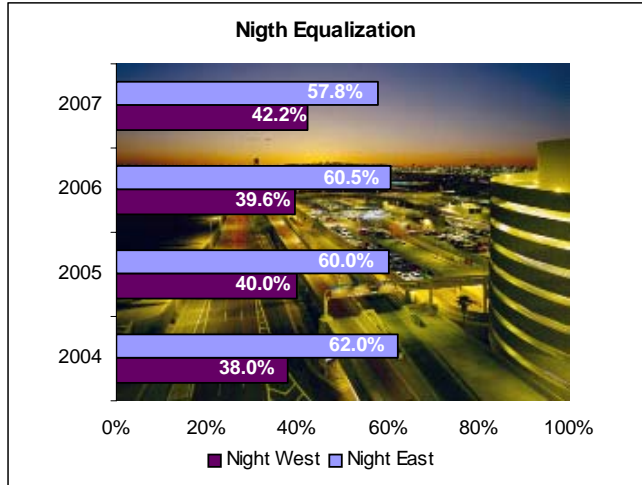
Top All Cargo Carriers

Among the larger all cargo carriers Kitty Hawk Air Cargo had on average best compliance with the Tempe Corridor during 2007.



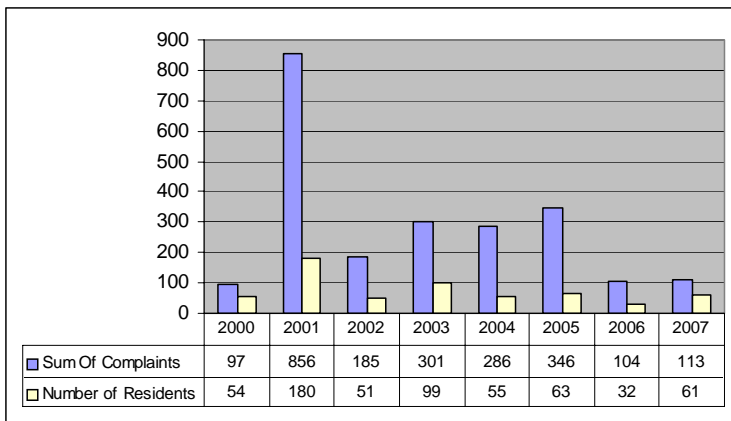
3. East/West Departure Split

The annual split in all jet and large turboprop aircraft departures to the east and west of the Phoenix Sky Harbor International Airport differs between night and day time hours. Departure directions are not favorable for Tempe during the nighttime hours. Combining day and night time hours, most jet and large turboprop departures goes towards the west.

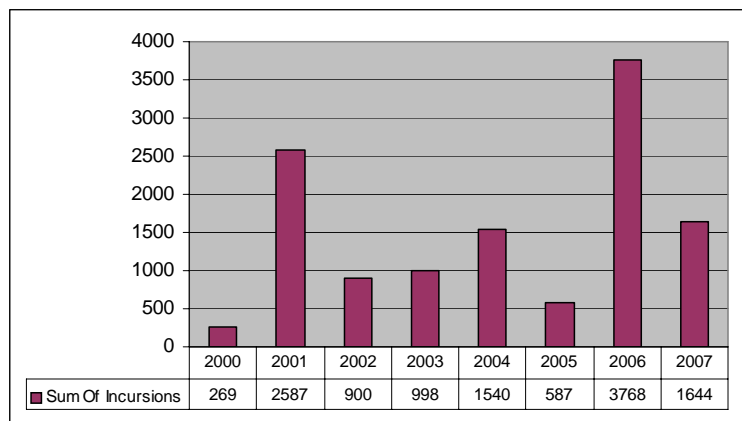


Day = 7: 00 a.m. to 9:59:59 p.m. local time and Night = 9:59:59 p.m. to 7:00 a.m.

4. Complaints



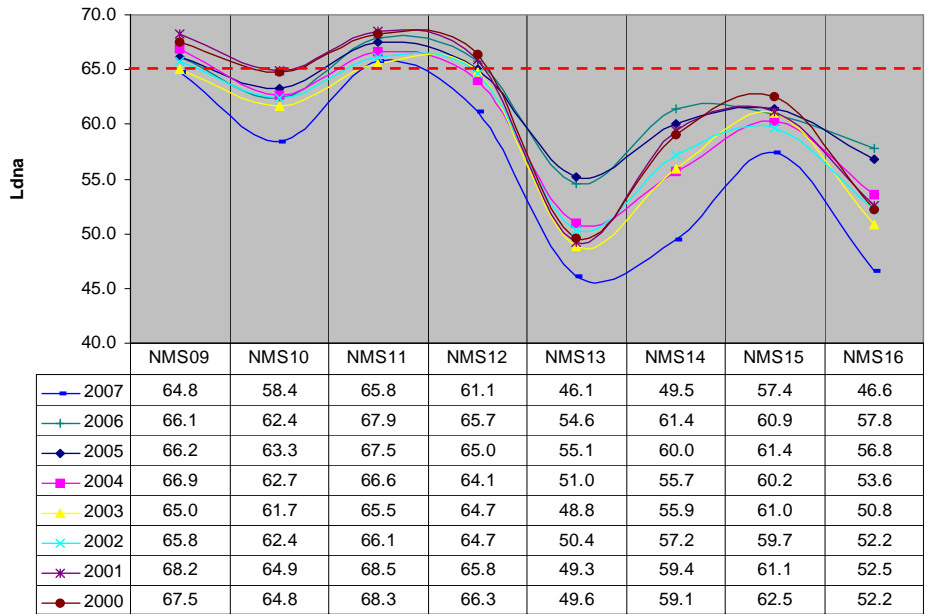
The City of Tempe started registering aircraft noise complaints from Tempe residents in October 2000 after the opening of the third runway at Phoenix Sky Harbor International Airport. The numbers have come down, but more complaints are coming in from central and southern parts of the City. The large numbers of disturbing aircraft shown in the graph below are largely identified by residents in northern neighborhoods of Tempe where aircraft are at lower altitudes.



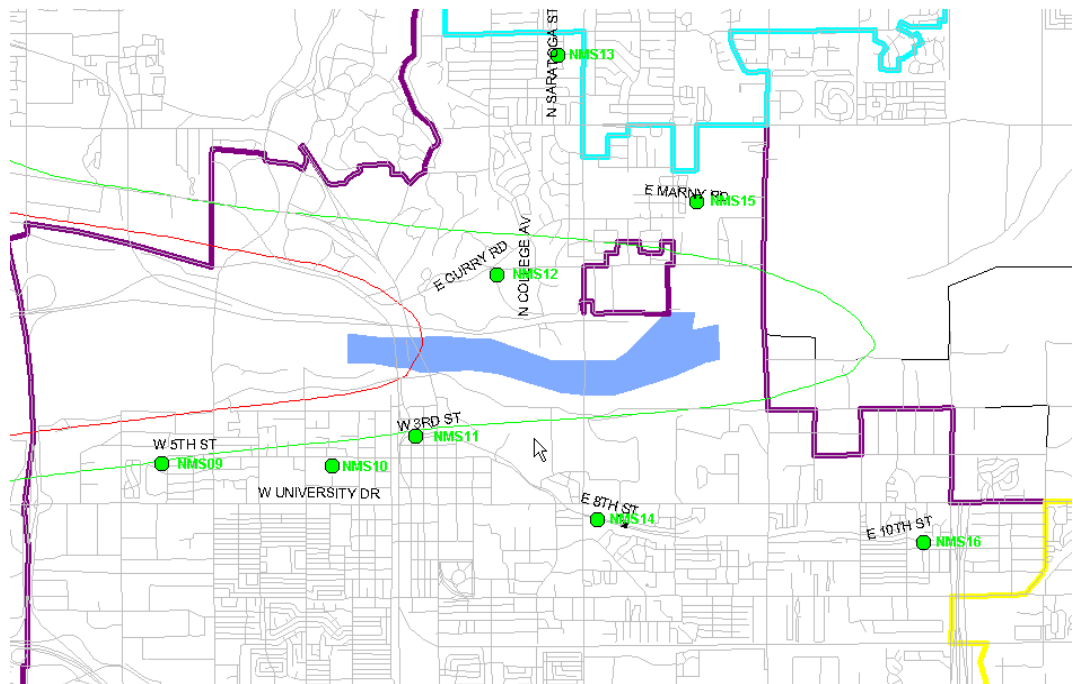
5. Averaged Noise Levels

Annual summary of aircraft (Day-Night) average noise levels (L_{dna}) registered by the airport Noise and Flight Track Monitoring System, show decreases in noise levels. The Tempe Beach Park monitor located close to the southern border of the 1999 65DNL noise contour line projected for the Phoenix Sky Harbor International Airport still show annual levels above 65 L_{dna}.

LDNA Annual Energy Average



Noise Monitoring Sites



The 1999 65 DNL noise contour is the green line. The 70 DNL is depicted in red.