

# Noise

## Mitigation Monitoring Report



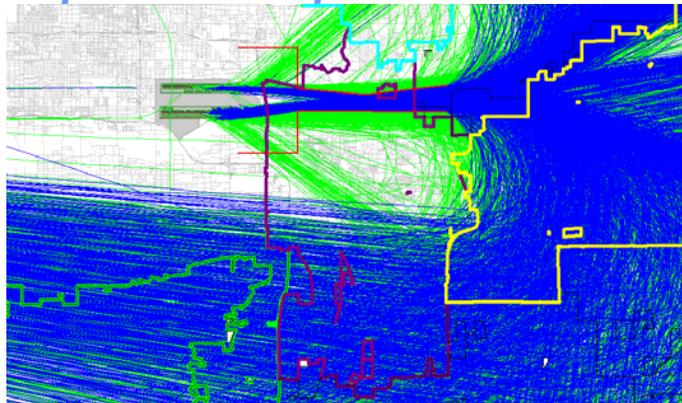
April 2008

### Most Compliant Airline:

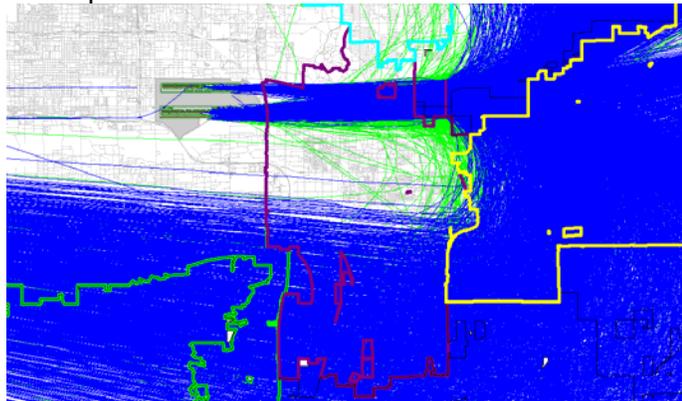
**Swift**  
58%

Learn about noise mitigation procedures over Tempe on p.7

### Departure Compliance



Tempe Corridor: **41.7%** with the 4-DME SID



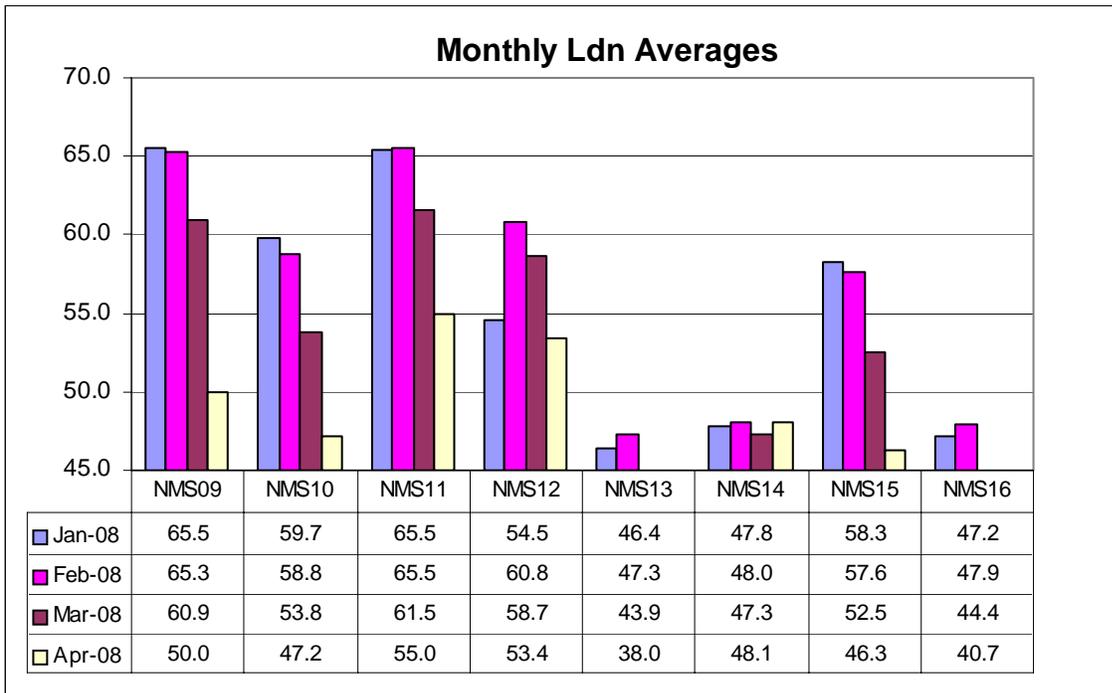
Phoenix Gate: **96.4%** with the 4-DME SID



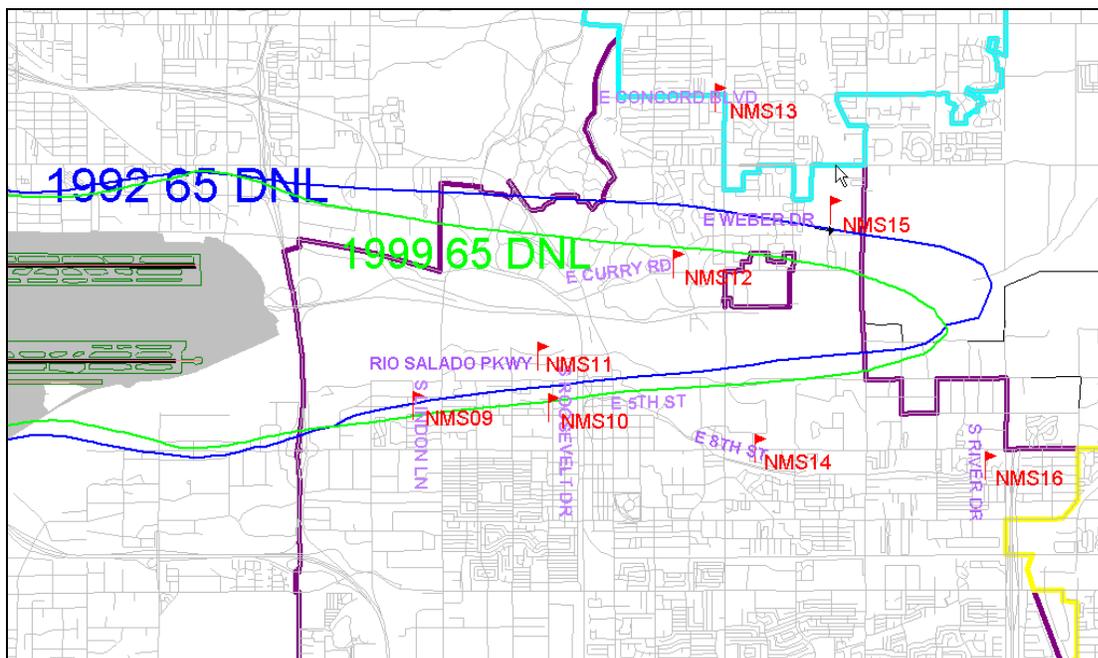
Tempe Aviation Commission

This report is assembled for the Tempe Aviation Commission (TAVCO) to monitor the monthly compliance of operations at Phoenix Sky Harbor International Airport with certain 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 advise on aviation noise and other issues relating to the Phoenix Sky Harbor International Airport, which is owned and operated by the City of Phoenix. The City of Tempe is located directly east of the airport's 3 parallel runways.

**Aircraft Noise Energy Levels:**



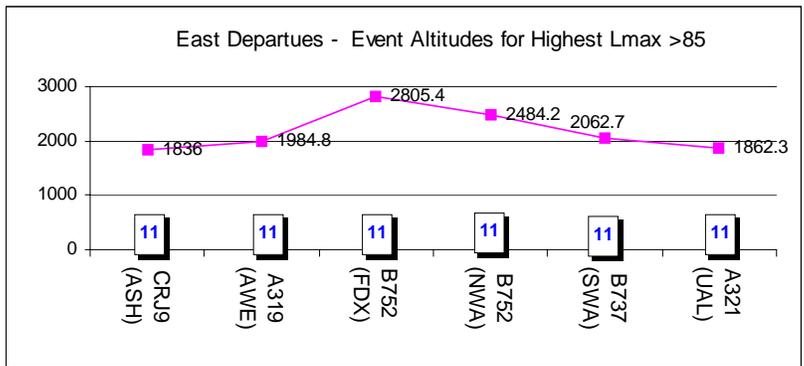
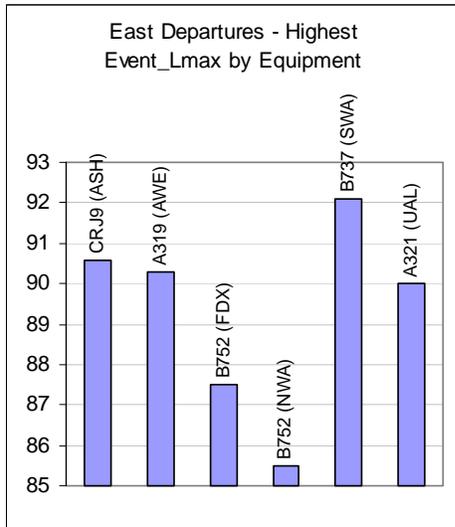
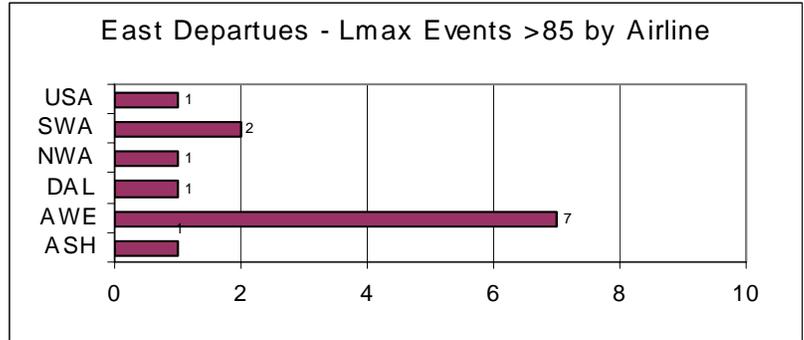
LdnA or day-night level (DNL), is a descriptor of noise level based on energy equivalent noise level (Leq) over the whole day with a penalty of 10 dB(A) for night time noise (22.00-7.00 hrs). DNL is used to forecast noise exposure contour lines around airports. Sharp decreases in average monthly Ldn levels at monitoring sites in Tempe for April 2008 were most likely caused by fewer high sound energy events and fewer jet departure operations to the east compared to previous months, see p. 3.



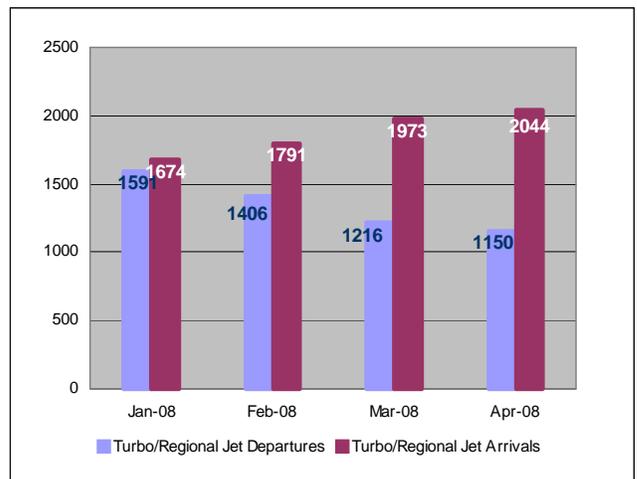
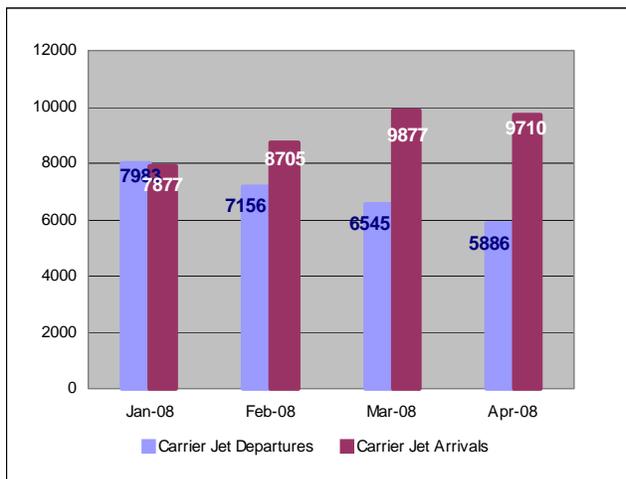
PHX Noise Monitor Sites and FAR Part 150 1992 and 1999 65 DNL contour lines in Tempe.

**Peak Noise Levels:**

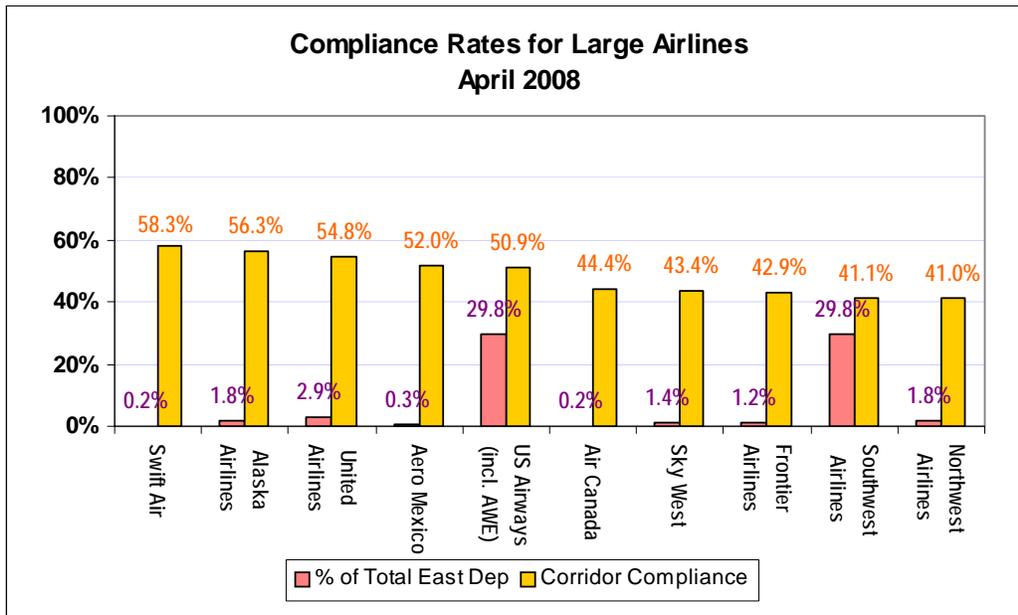
Lmax is the maximum sound level (dB) registered during a particular noise event. One aircraft departure, arrival or overflight typically results in noise events being registered at more than one NMS. The depicted maximum noise levels were registered at NMS 11, (Tempe Beach Park). The drop in very high energy level events from departing jets towards the east during the month of April 2008, and by MD80 series aircraft in particular, contributed to a substantial reduction in the overall number of high sound energy events registered at the Tempe monitors.



**East Operations Summary:**

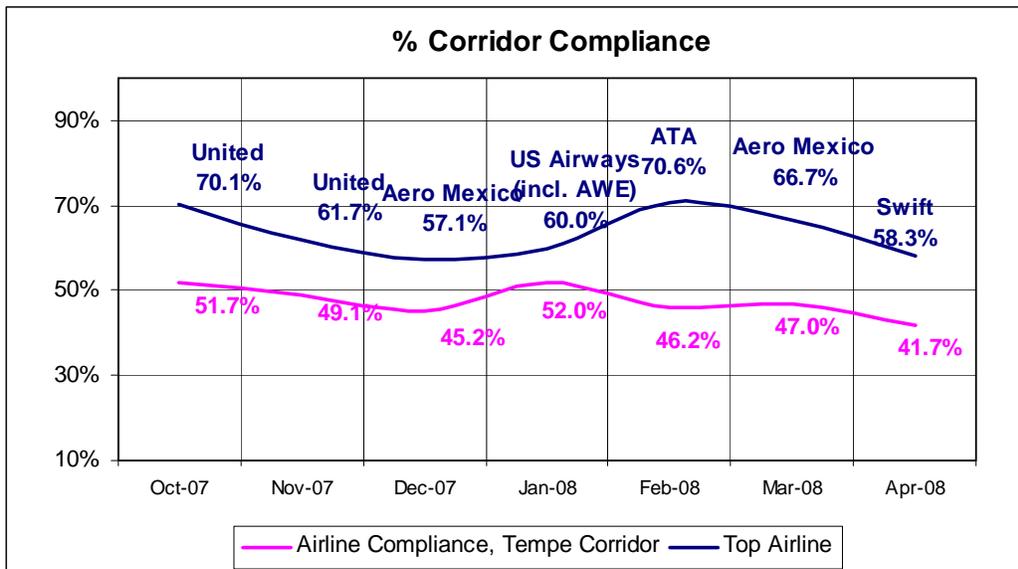
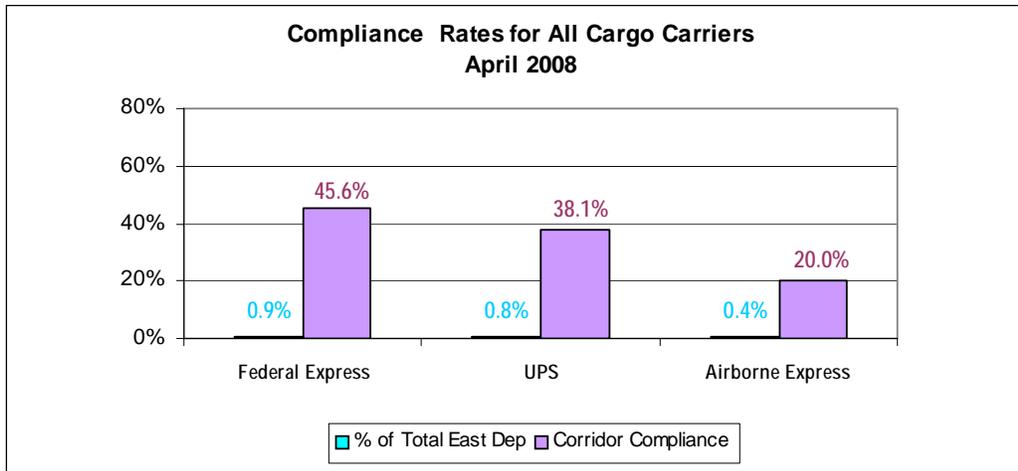


Corridor Compliance with 4-DME Standard Instrument Departure procedure:

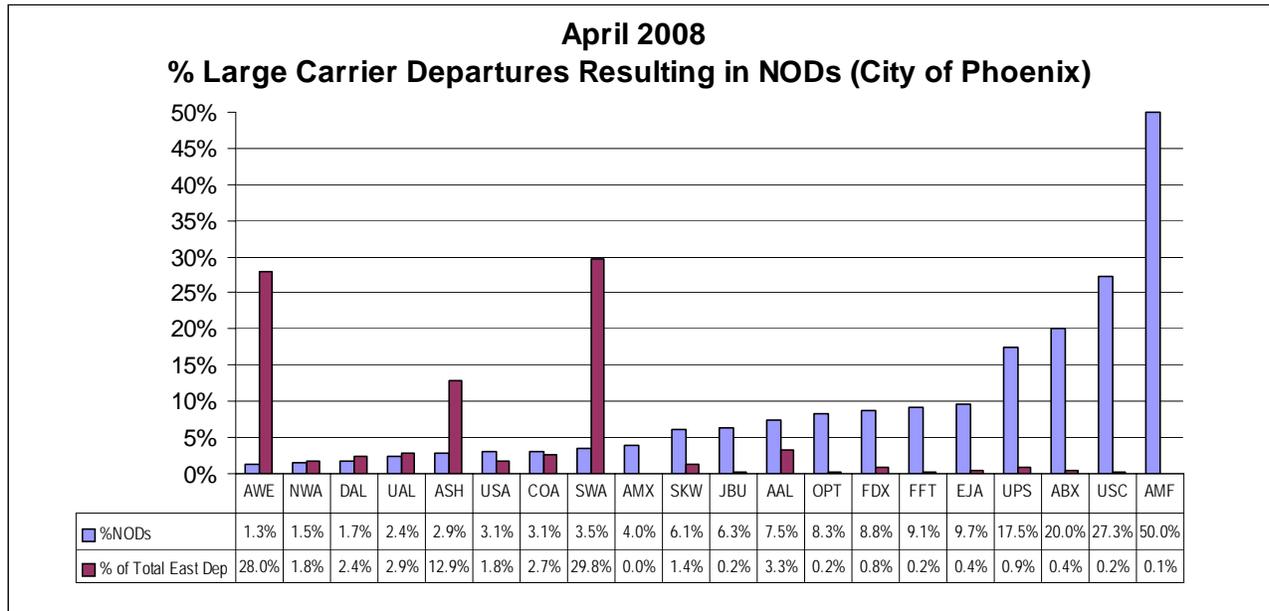


4-DME deviations during the following hours were identified by PHX as being weather impacted, and have not been included:

- 4/13 6:03
- 4/13 12:04 - 13:58
- 4/13 16:12 - 16:59
- 4/13 18:08 - 18:42
- 4/14 11:45 - 11:47
- 4/14 14:56
- 4/16 5:52
- 4/19 10:51 - 10:53
- 4/19 12:43
- 4/26 22:04
- 4/27 12:31 - 13:12
- 4/28 11:08
- 4/28 14:35
- 4/29 08:57
- 4/29 11:20



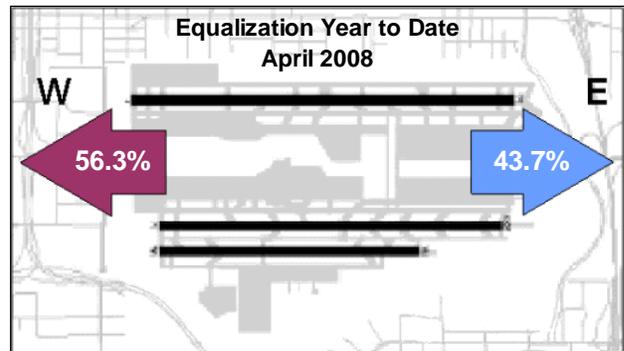
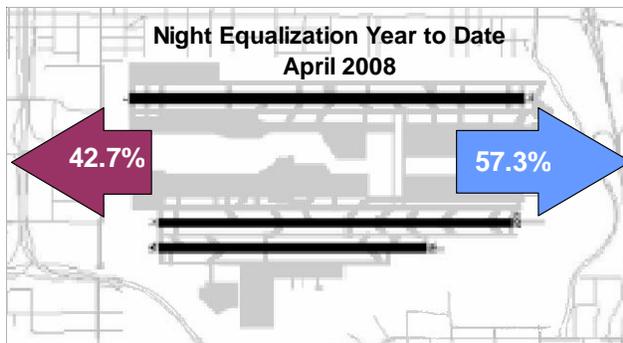
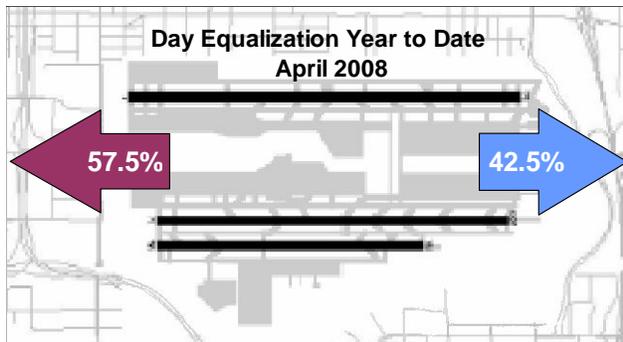
Notices of Deviation:



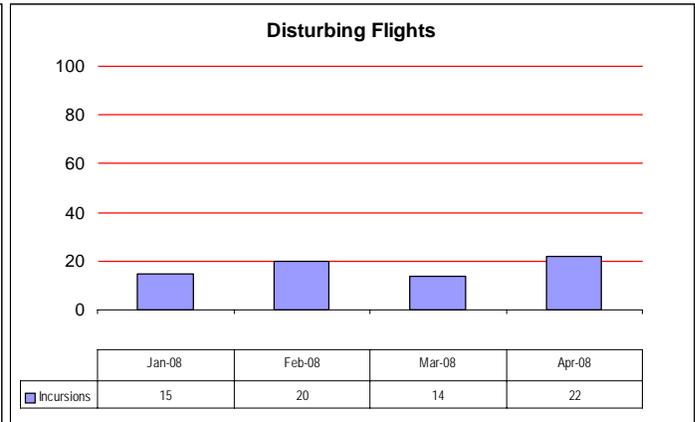
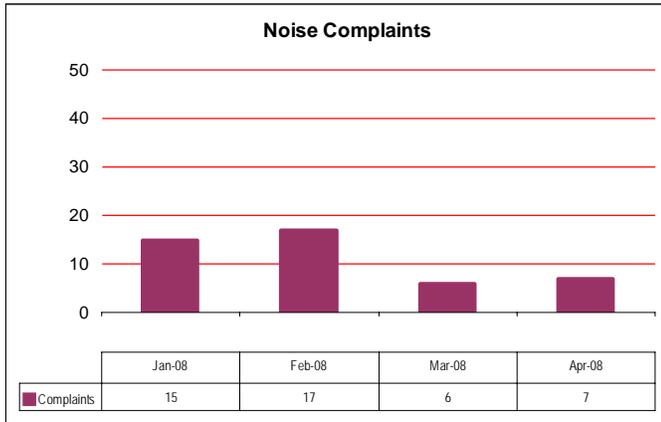
Includes the following airlines with more than 10 departures to the east:

- |                  |                 |                 |                            |                           |
|------------------|-----------------|-----------------|----------------------------|---------------------------|
| AWE America West | ASH Mesa        | AMX Aero Mexico | OPT Flight Options         | UPS United Parcel Service |
| NWA Northwest    | USA US Airways  | SKW Sky West    | FDX Federal Express        | ABX Airborne Express      |
| DAL Delta        | COA Continental | JBU JetBlue     | FFT Frontier Airlines      | USC US Check              |
| UAL United       | SWA Southwest   | AAL American    | EJA Executive Jet Aviation | AMF Ameriflight           |

East/West Departure Split:



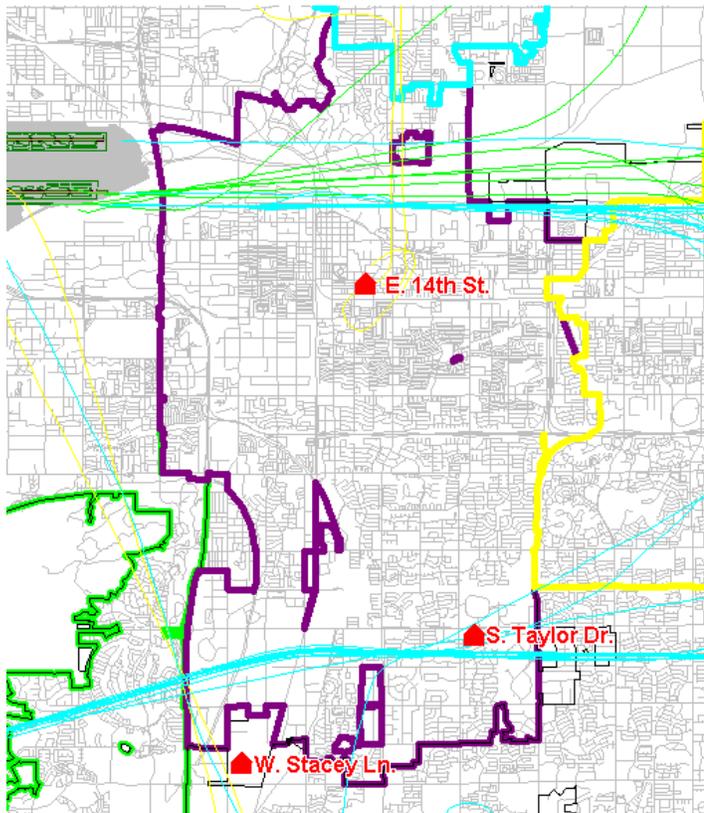
Received Complaints:



Incursions = Over flights identified to individual aircraft.

3 residents made complaints on aviation noise to the City of Tempe in April 2008 reporting:

- Early morning departures between 4:00 and 5:30 a.m.
- Helicopter from the Papago Army Aviation Support Facility circling and landing in the area of Apache Blvd. and Normal Avenue.
- Low flying helicopters transitioning through residential areas close to Priest Drive north of Ray Road during early morning hours and evening hours, some at very low altitudes.
- One day with particularly heavy air carrier traffic over neighborhoods just south of Elliot Road at McClintock Drive.



PHX departures: —  
 PHX arrivals: —  
 PHX airspace transition flights: —

**IGA on Noise Mitigation Flight Procedures:**

In 1994 the City of Phoenix and the City of Tempe agreed to continue noise mitigation flight procedures already in use over Tempe from the Phoenix Sky Harbor International Airport. The IGA was made after City of Tempe had challenged the plans for the construction of a third runway because of inadequate assessment of the environmental impacts, and the legal challenge was mediated and settled. The City of Phoenix agreed to submit a F.A.R. Part 150 Noise Compatibility study for the Phoenix Sky Harbor International Airport where the following agreed upon measures were included:

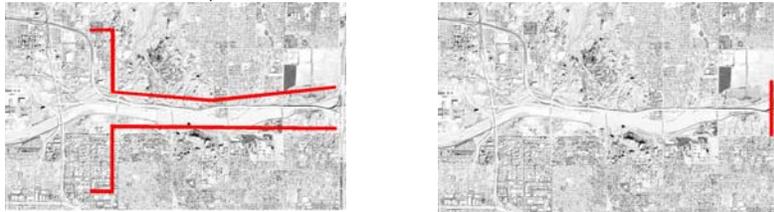
1. Have jet and large turboprop aircraft depart to the east over the Salt River.
2. On an annual basis equalize the noise burden from jet and large turboprop aircraft departures between east and west during daytime and nighttime hours.



3. The agreement also included a new procedure for mitigation noise from arriving jets and large turboprop aircraft to the proposed third runway (25L).



According to the 1993 Environmental Impact Statement for Phoenix Sky Harbor International Airport master plan improvements that included construction of the third runway, the 1-DME Standard Instrument Departure Procedure was to be continued for noise mitigation purposes. After the VORTAC was moved, it became the 4-DME SID.

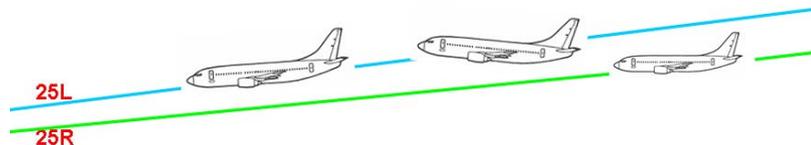


The Tempe Aviation Commission used the SID to come up with a "Corridor" to measure airline compliance with the 4-DME SID. The airport uses a 5,500 feet long imaginary line, "Gate", running north south at 4-DME or approximately at Price Road. Turns by carrier jets north or south away from the Salt riverbed before reaching this line results in a notice of deviation from the airport to the responsible airline.



On March 27, 2002 the FAA suspended formalization of a "side step" procedure that had been in use after the third runway opened in October 2000. Presently the FAA is clearing jets and large turboprop aircraft for straight-in approaches to Runway 25L from the east. 4 contributing factors led to negative effects on flight safety and the decision to suspend the side step procedure:

1. The destabilizing effect on the approach.
2. The inability to intercept the glide slope for the third runway.



Because the threshold for Runway 25L is located farther west than the threshold for Runway 25R, the glide slope is higher up than the glide slope to Runway 25R. Using the Runway 25R glide slope a pilot would need to apply power and both turn and climb close to landing to intercept the glide slope for Runway 25L when executing the side step maneuver when abeam Sun Devil Stadium.

3. Computer reprogramming going on in the cockpit.
4. Loss of visual reference, particularly at night (Sun Devil Stadium not always being lit).