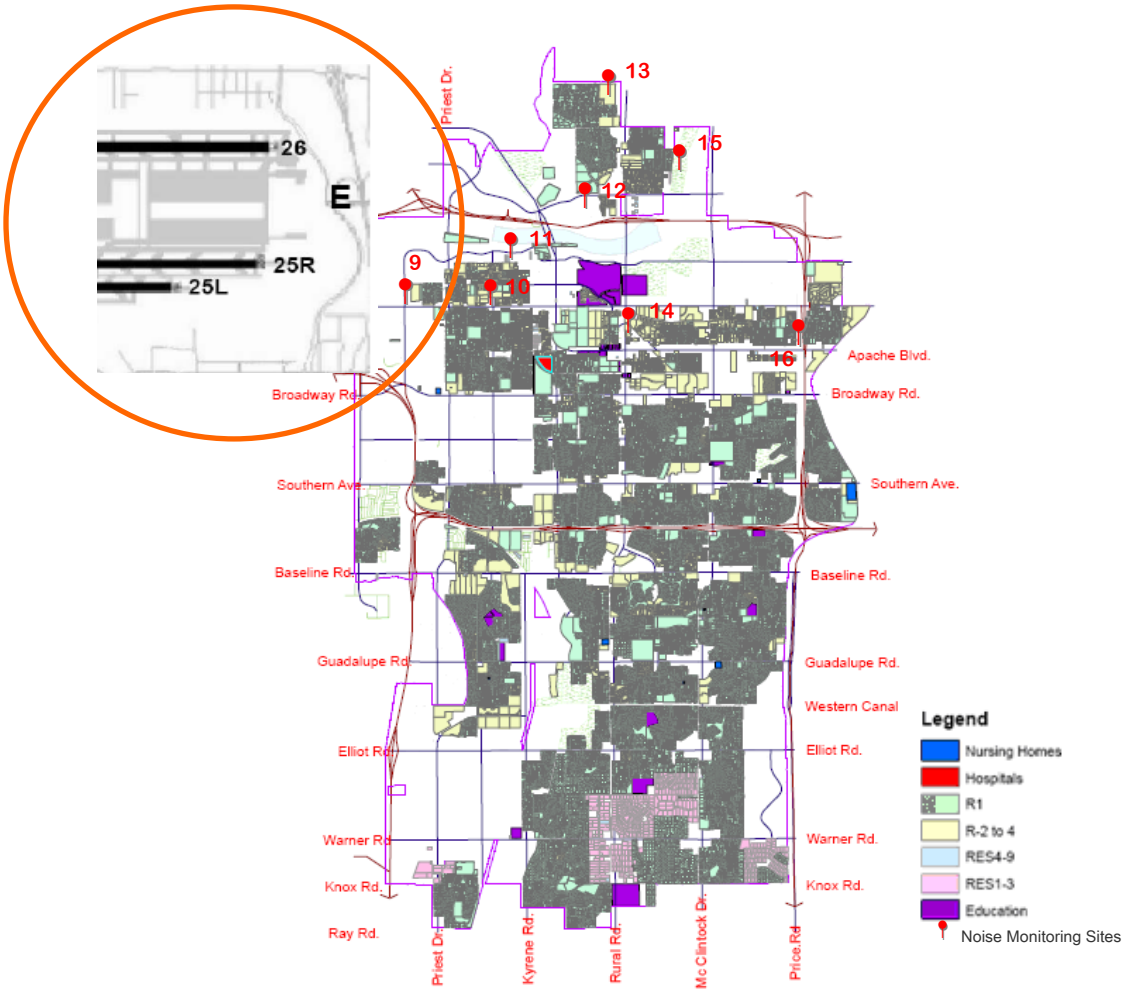
Tempe

2012 1st Quarterly Noise Monitoring Report

PHX East



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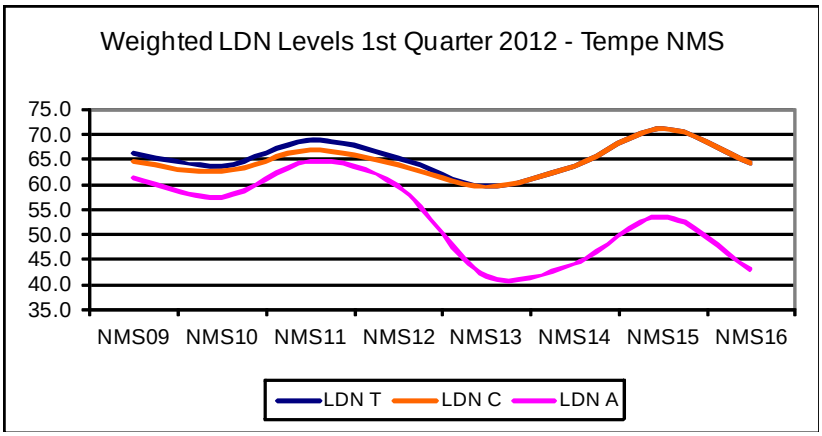
Aviation Noise Monitoring

The Phoenix Sky Harbor International Airport Noise and Flight Track Monitoring System (NFTMS) has 8 fixed Noise Monitoring Sites (NMS) in Tempe located in neighborhoods around the Town Lake/ Rio Salado area in proximity of the 65 DNL noise exposure contour line for the airport. Through an agreement made with the City of Phoenix the City of Tempe can access noise monitoring data collected by the system and use supporting software that filters the data to indentify the noise energy contributions attributed to aircraft operations over areas the monitors are located.

A. Weighted Sound Exposure Levels

Average monthly sound exposure levels of aircraft events, are calculated from the Ldn or day-night average sound level also called DNL. This is a summary description of noise based on long-term equivalent level (Leq) with a penalty of 10 dB (A) added for nighttime sound occurring between 22.00-07.00 hours. Average sound levels created by aircraft, Ldn A, are a product of detection tools built in to the NFTMS, which separate events registered at the monitoring site. The ambient sound events from sources picked up at a monitoring site, the Ldn C and events attributed to an aircraft over flight, the Ldn A. Ldn T is an expression of the total sound.



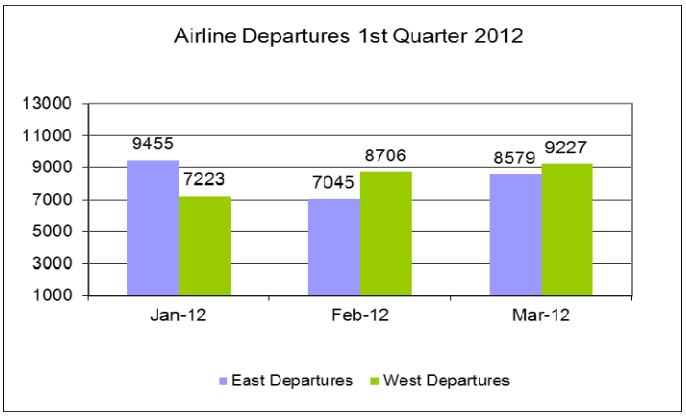
Ldn A decreases with the distance to the airport's runways. The monitored standard deviations are naturally higher for the monitors located at sites in Tempe located outside the downtown area south of the riverbed, where the distances to the aircraft as one of the sources of noise in the local environment are greater.

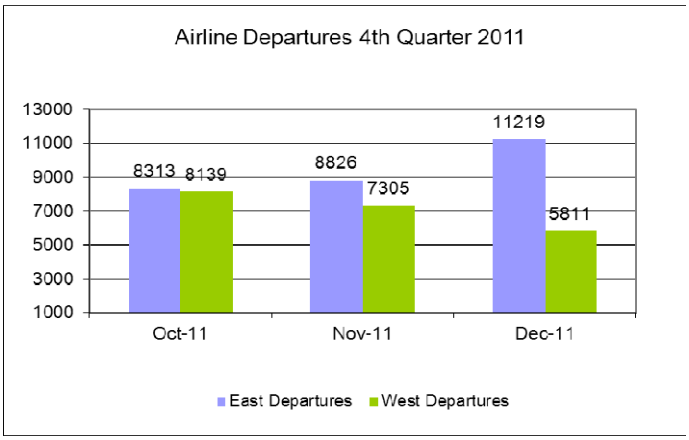
B. East – West Equalization of Noise Burden

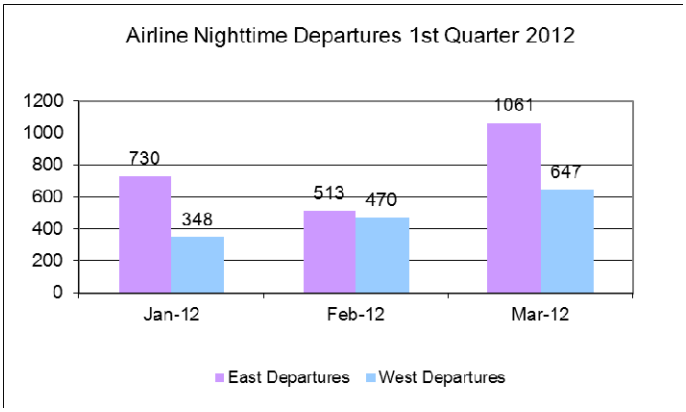
The airport Air Traffic Control Tower is directing large carrier departure traffic with the goal of accomplishing a 50/50 annualized east west split. A procedure for noise mitigation over Tempe delay air carrier turns away from the Salt River to the airspace over the Highway 202/ 101 intersection. There is no similar constraint for departure headings towards the west.

Departure flow east and west are determined over the year by daily and seasonal changes in wind directions, and the cities of Tempe and Phoenix has agreed that airport should attempt to distribute the noise burden from departing large commercial aircraft equally east and west on an annual basis.

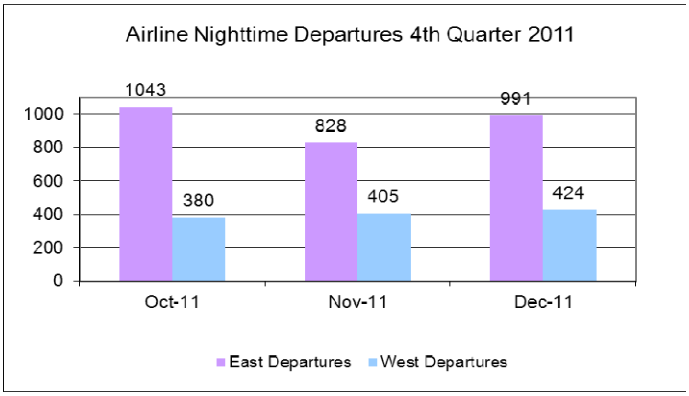
The flow of commercial air carrier and corporate jet departures tuned back to west flow dominance the first quarter of 2012 after a majority going towards the east in the two last quarters of 2011. East departures declined by 6.1% and west departures increased by 8.4% compared to the fourth quarter of 2011.



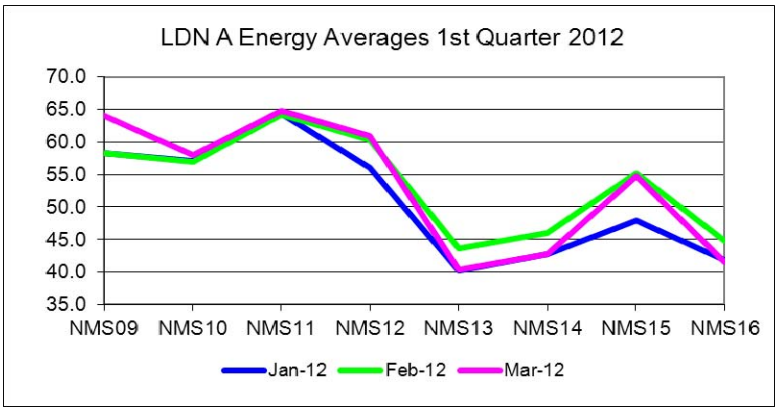




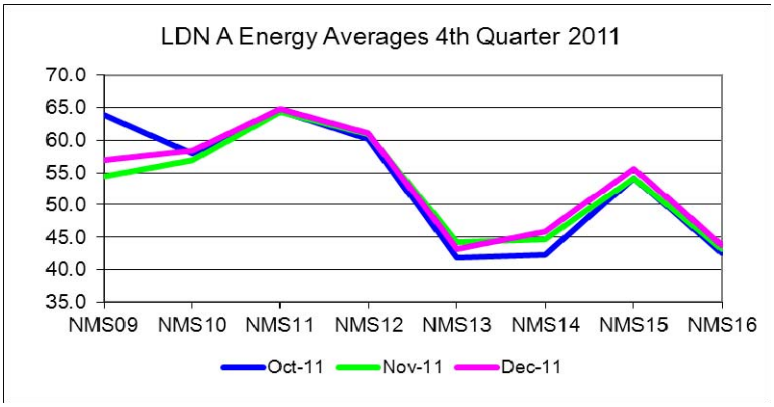
Over the quarter as a whole departures occurring between 10:00 p.m. to 7:00 a.m. decreased towards the east with 10.8% and increased towards the west by 9.6% compared to the 4th quarter of 2011.



The average monthly Ldn A sound energy levels varied. The north runway was temporary closed from January 10, 2012 to January 31st, 2012.

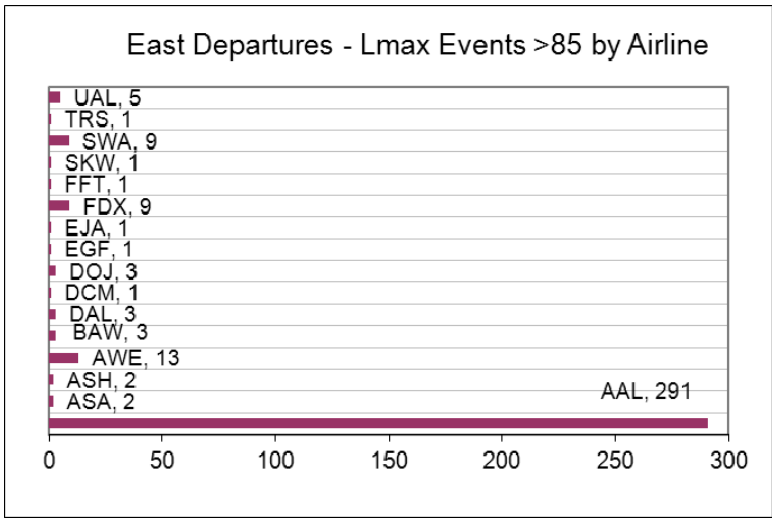


NMS 9, which average was unusually low in the last quarter of 2011, picked up and showed normal levels in March 2012. The monitoring site located in the periphery did not show increases compared to previous quarters as reported for the last quarter of 2011.

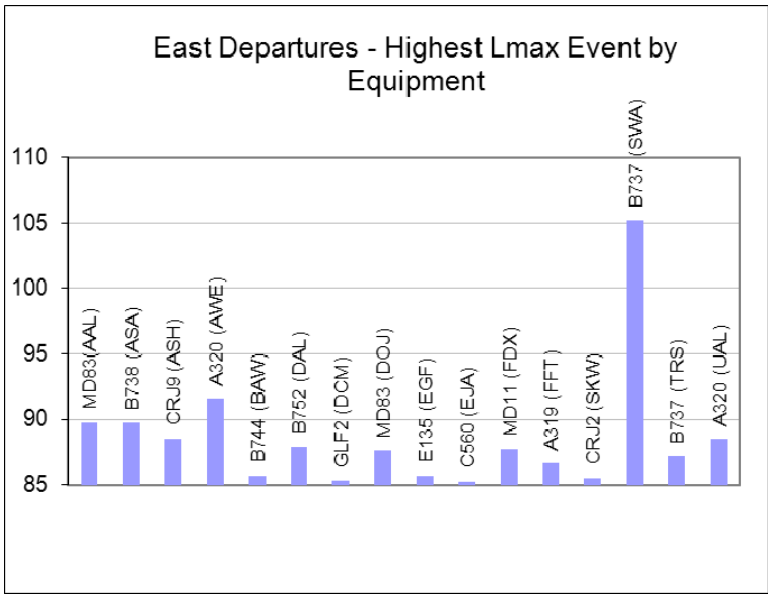


C. Registered Maximum Sound Energy Levels

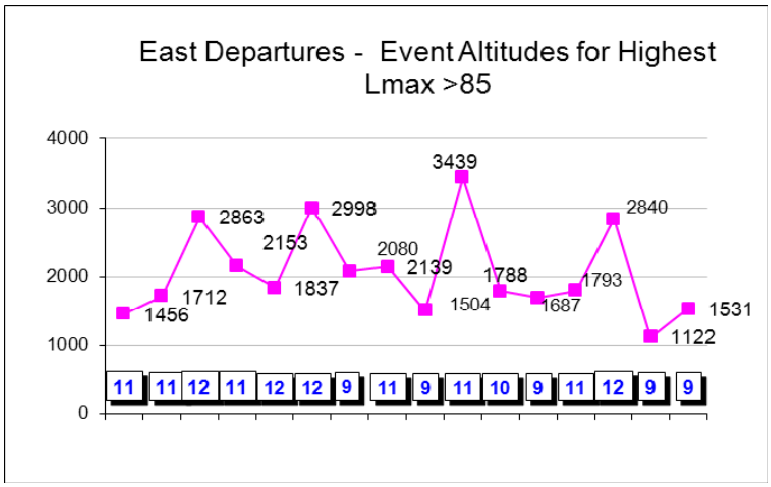
The number of higher sound energy level events attributed to airline operations varies each month, which influences monthly Ldn average levels. Lmax is the maximum A- weighted sound level, dB (A) registered during a particular sound event. A-weighted means the sound is measured at frequencies that reflect the sensitivity ranges of the human ear.



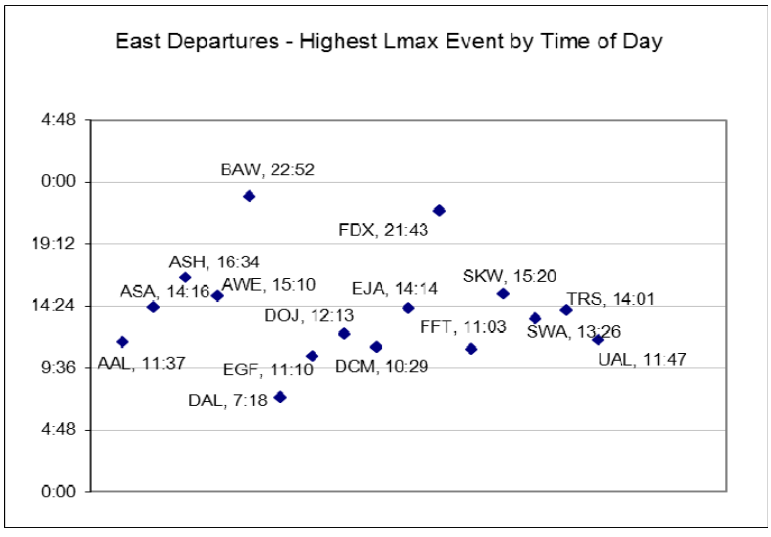
As usual American Airlines had the most registrations of high Lmax levels, but less than last quarter of 2011. The chart displays events at the monitoring sites correlated to radar track data.



A Southwest Airlines B737created the highest Lmax level among civil aircraft departing towards the east. It produced Lmax 105.2 dB (A) over the Curry Road close to Rural Road.



The highest Lmax at lower altitudes were reached by an AirTran Airways B737 and an American Airlines MD83.



Information about the NFTMS and the City of Tempe agreement with the City of Tempe are available at www.tempe.gov/aircraftnoise