

# Monthly Noise Report

## April 2018

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# Overview

The City of Phoenix Aviation Department operates the Phoenix Airport System which consists of Phoenix Sky Harbor International Airport (PHX), Deer Valley (DVT) and Goodyear (GYR) Airports. The Department serves as the primary liaison between the community, airlines and the Federal Aviation Administration (FAA) regarding aircraft overflight activity and noise concerns. While the authority to control aircraft in flight and on the ground, lies exclusively with the FAA, the airlines control the number of flights and flight schedules. The Department collects aircraft noise and flight operations data to analyze, advise and assist the community with up-to-date information. Additionally, the Department manages noise concerns received from residents through a variety of services including the noise hotline, PlaneNoise smartphone app, PublicVue flight tracker and the Department's website complaint form. This report provides a summary of the data collected for the preceding month and in context with historical data for operation counts, flight direction, complaints, and adherence to noise abatement procedures.

## APRIL 2018



- PHX had 37,044 operations (8.9% less than last month)
- DVT had 36,456 operations (5.7% less than last month)
- GYR had 6,864 operations (5.6% less than last month)



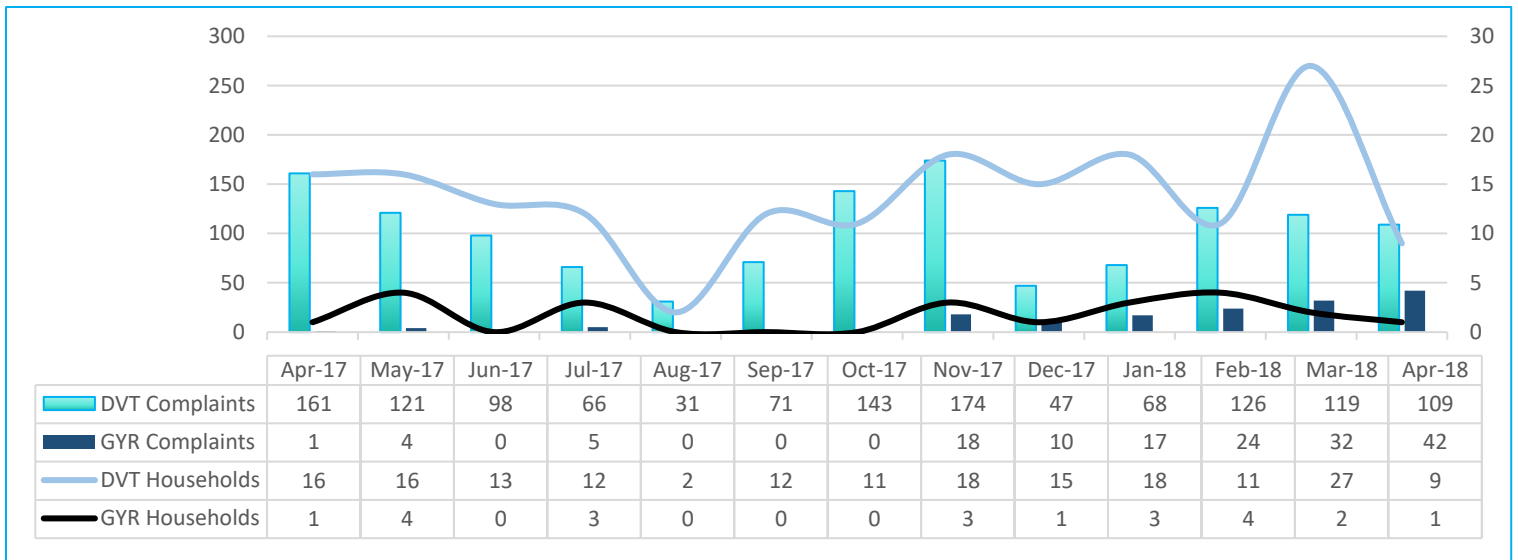
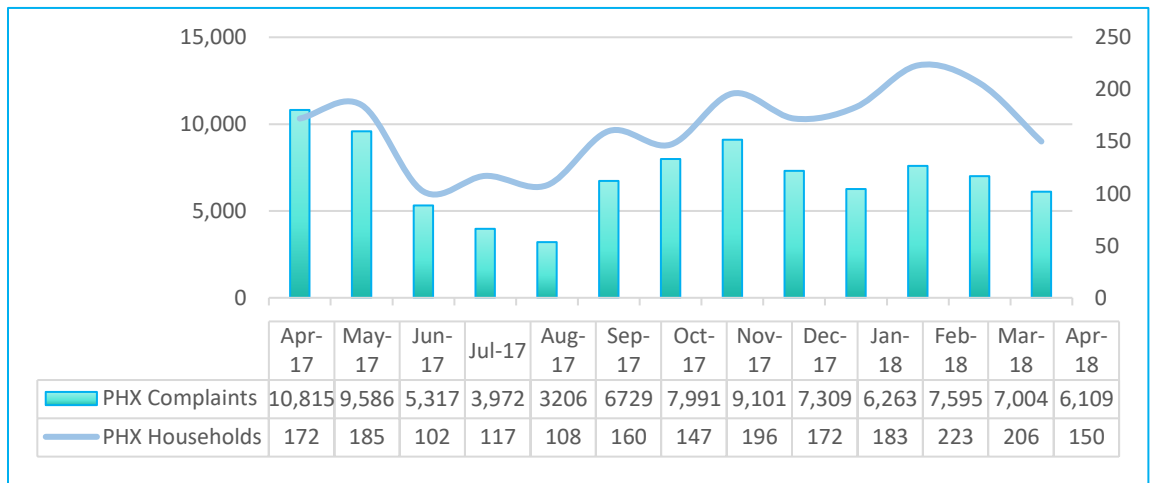
- 160 households filed 6,260 complaints for PHX, DVT and GYR Airports
- Staff received and responded to 155 requests for follow-up



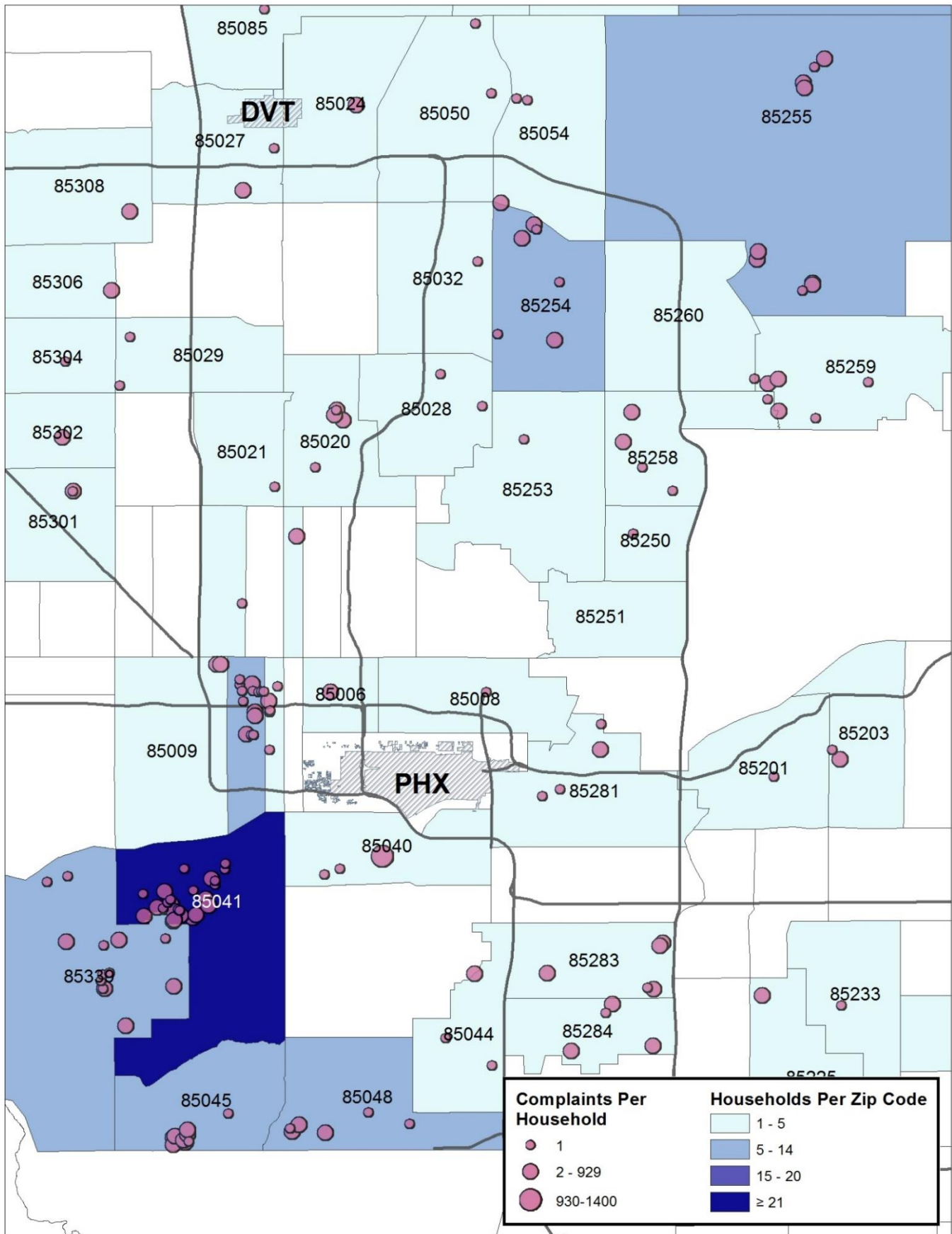
- "4-DME" compliance rate was 99.68% (PHX)
- "Equalization" rate was 65.20% westerly and 34.80% easterly (PHX)

## Noise Complaints

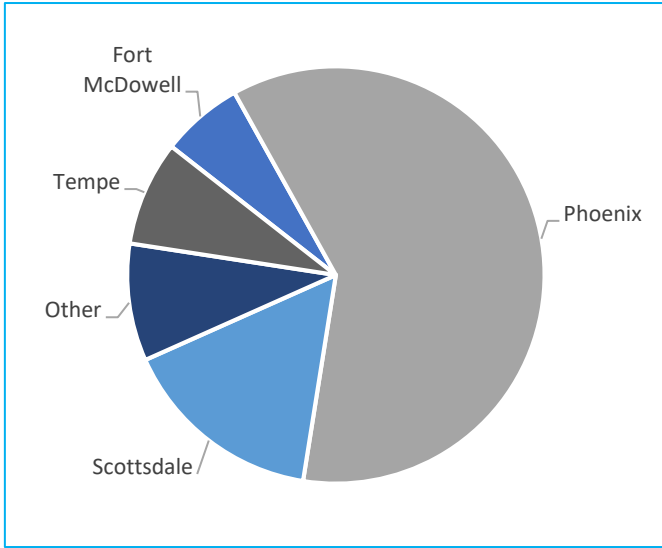
Many factors contribute to the number of complaints received each month and by how many people (households) including irregular operations, weather, seasonal demand changes, or new residents moving into an area impacted by aircraft operations.



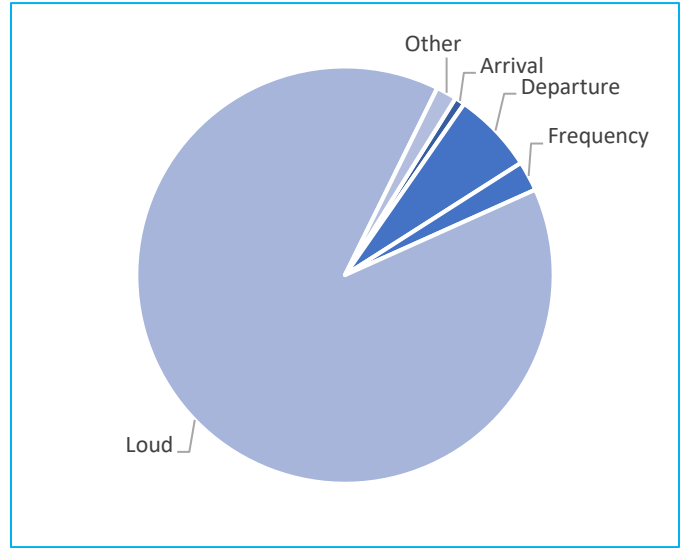
# April Complaints by Zip Code



Noise Complaints – By Community

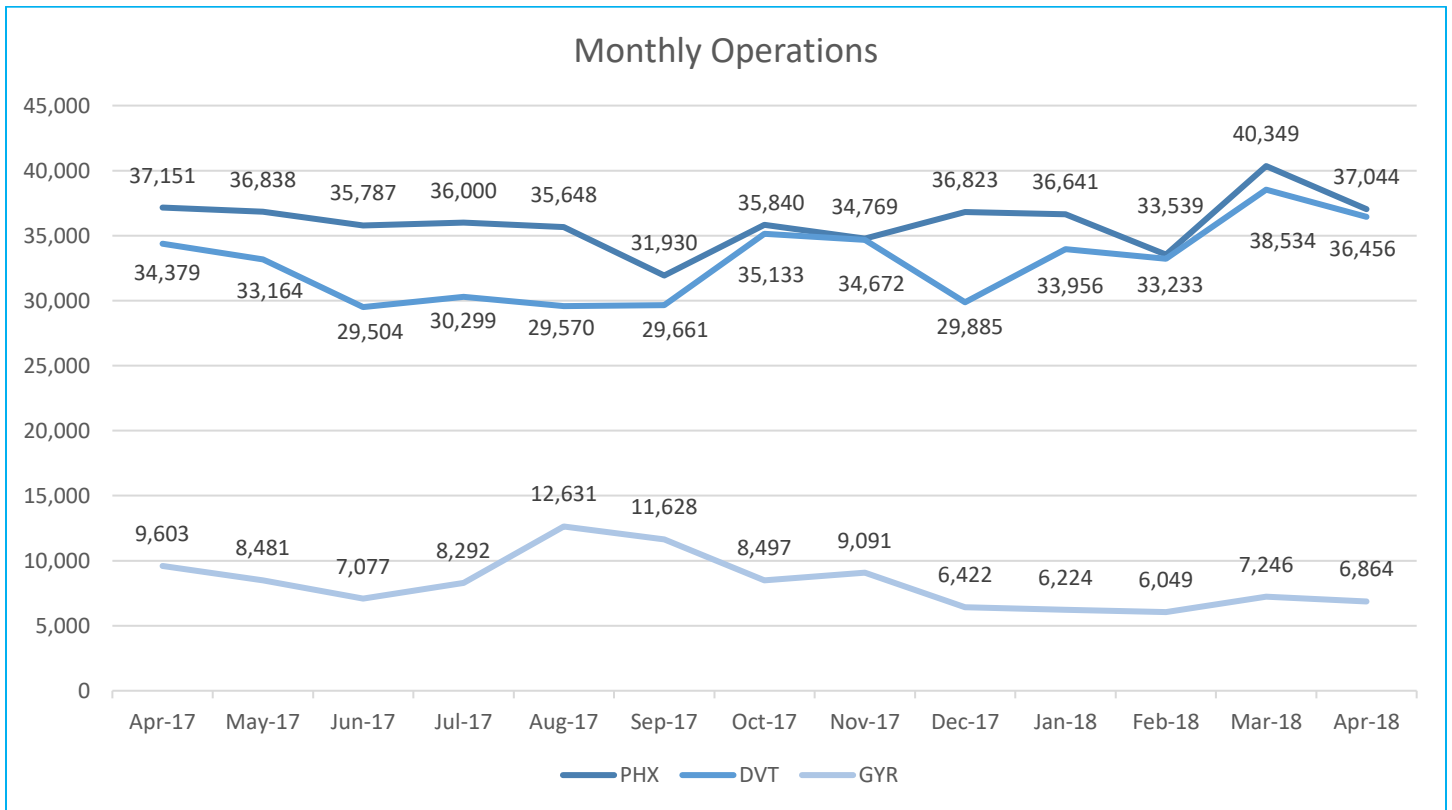


Noise Complaints – By Type



## Operations

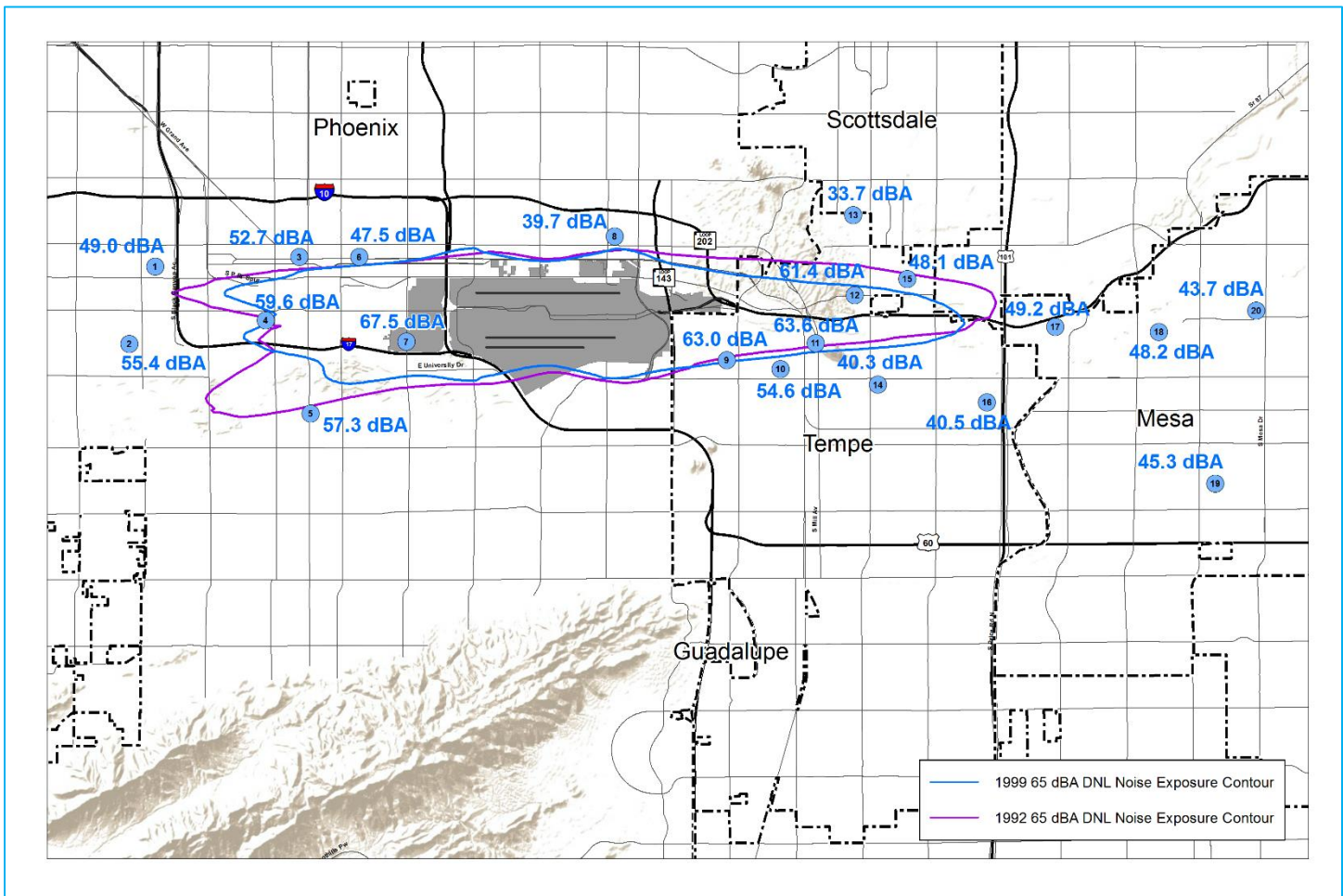
The graph below shows monthly aircraft operations over the last year (March is historically the PHX peak)



## Noise Monitoring Sites

Twenty noise monitors surround PHX in the communities of Phoenix (8), Tempe (8), and Mesa (4). The noise readings are computed as A-weighted day/night sound level (LdnA) averaged over a 24-hour period with penalty weighting for noise events between 10pm and 7am. Use of the LdnA (measured in dBA) and penalty weighting for nighttime events help ensure noise readings reflect community annoyance factors and issues specific to human hearing and noise energy frequencies.

<b>NMS</b>	1	2	3	4	5	6	7	8	9	10
<b>LdnA</b>	49.0	55.4	52.7	59.6	57.3	47.5	67.5	39.7	63.0	54.6
<b>% Δ</b>	1.4	2.3	-4.8	-0.4	-1.7	-0.7	-1.2	-1.4	4.9	8.6
<b>NMS</b>	11	12	13	14	15	16	17	18	19	20
<b>LdnA</b>	63.6	61.4	33.7	40.3	48.1	40.5	49.2	48.2	45.3	43.7
<b>% Δ</b>	-0.8	-0.9	-4.5	-6.7	-8.8	0.2	-0.6	-2.1	-2.4	-0.6

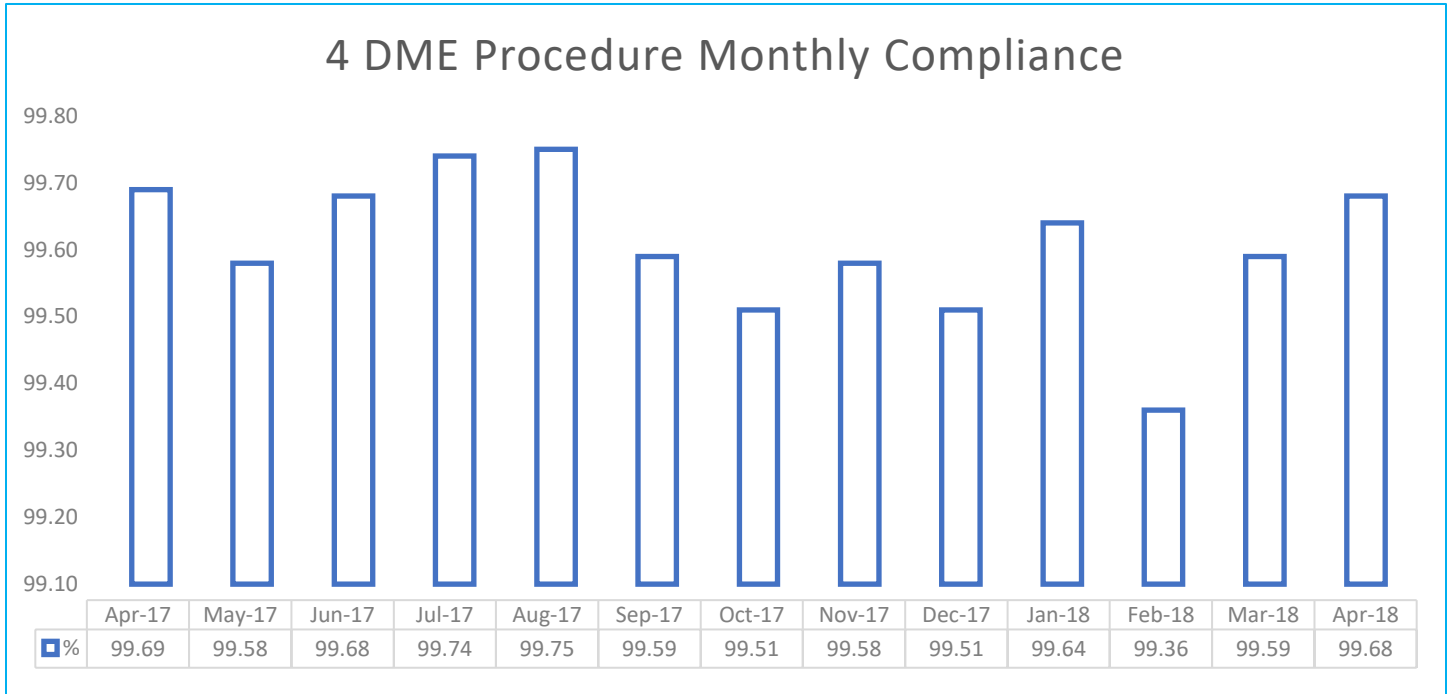


## Noise Mitigation Procedures

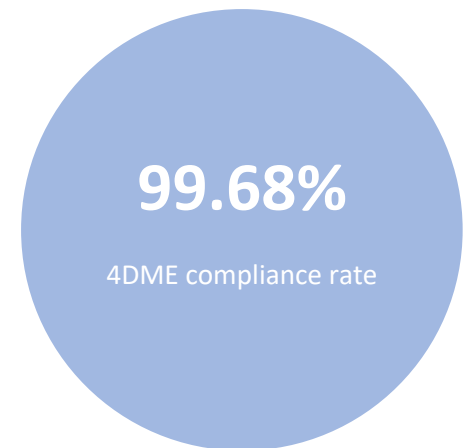
Working with the community, the FAA has implemented a variety of noise reduction measures. While some procedures may not be used at all times because of wind, weather, and other operational considerations; the Aviation Department encourages maximum use to the extent possible by monitoring and reporting on procedure compliance.

### Tempe “4 DME”

The 4 DME departure procedure directs jet aircraft departing PHX to the east to fly generally along the Salt River for approximately 6 miles before turning. The 4 DME procedure is designed to keep aircraft over the Salt River.

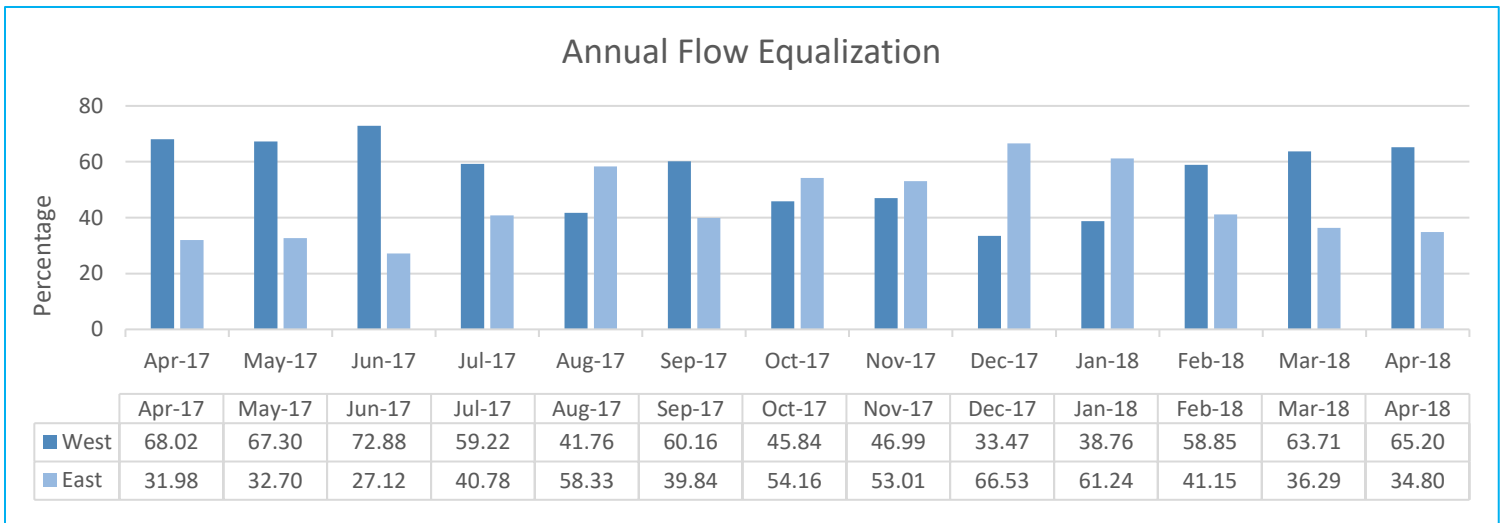
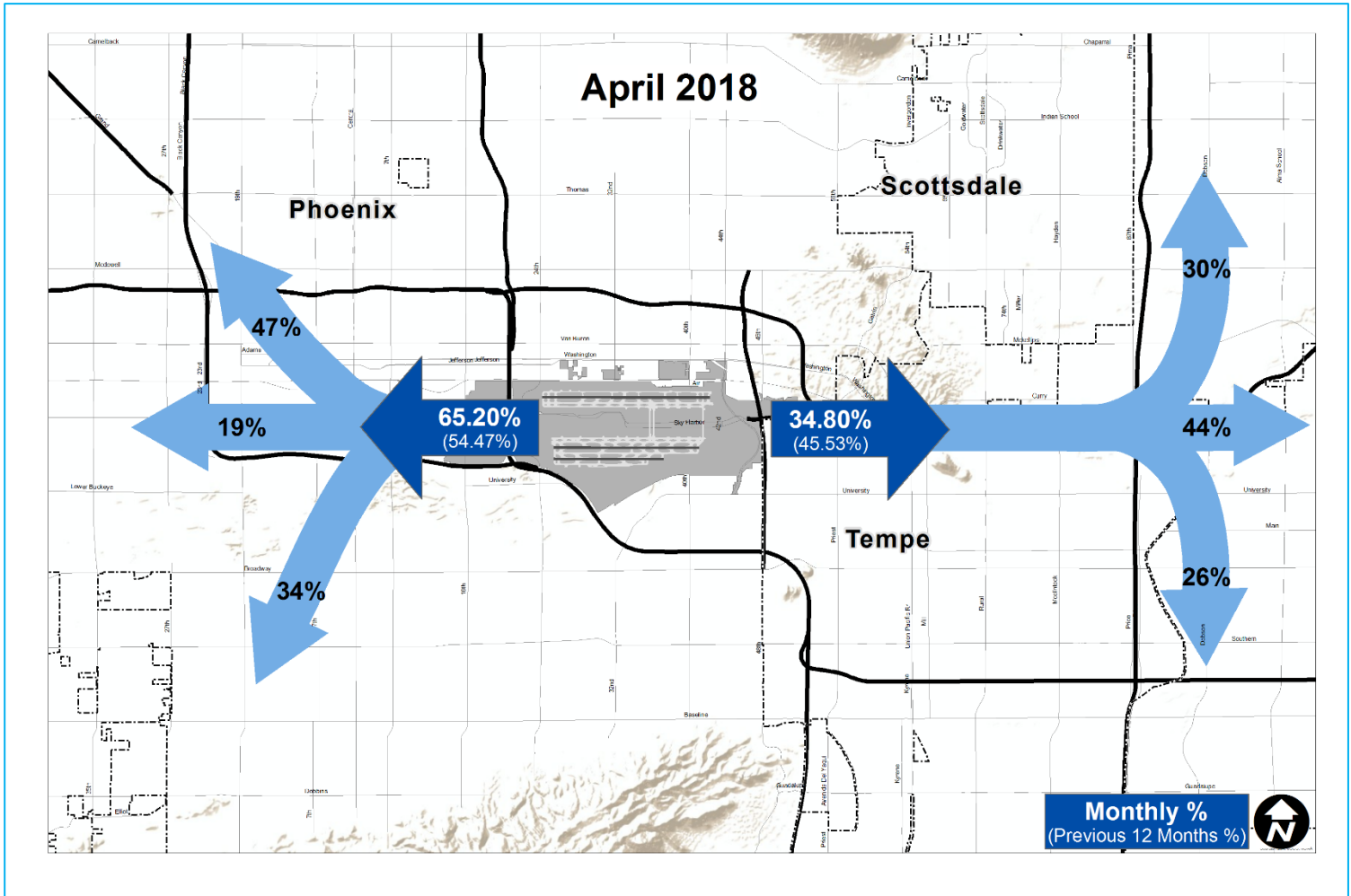


Operator	Dev.	Dep.	% Compliant
American Airlines	0	1,804	100.00%
Southwest Airlines	4	1,673	99.76%
Mesa Airlines	0	576	100.00%
United Airlines	1	301	99.67%
SkyWest Airlines	0	273	100.00%
Delta Air Lines	0	266	100.00%
Non-Airline	8	115	93.04%
Alaska Airlines	0	115	100.00%
Frontier Airlines	1	99	98.99%



## Equalization

The equalization policy for departures ensures that averaged over a calendar year, departures are equally distributed in east and west flow to minimize noise impacts to any one specific area. FAA typically directs more operations to the west during the summer and to the east in the winter due to the prevailing winds during those seasons.





## Joint Petition “43<sup>rd</sup> Ave Gate”

Per the Joint Petition between FAA, City, and Historic Neighborhoods accepted by the US Court of Appeals; FAA must approximate the location of historical west-flow departures in using performance-based navigation or RNAV. The Joint Petition provides that in approximating the historical departures, the FAA will not turn aircraft prior to 43<sup>rd</sup> Avenue unless there is a unique safety or weather issue. Similar to the 4DME compliance monitoring the Aviation Department conducts for east-flow departures; the following graphic shows the amount of “early turns” relative to 43<sup>rd</sup> Avenue for the preceding month.



## Conclusion

Monitoring community noise impacts and advocating for continuous improvement through noise mitigation and abatement is a team effort; the Aviation Department relies on the valued feedback and time of community members in communicating ongoing concerns and new issues. The Aviation Department strives to facilitate compliance, awareness and positive change with regulators (FAA) and operators (airlines) so that our community may enjoy all the benefits of a world-class Airport System with the absolute minimum of impacts to any household or place where the effect of aircraft operations is not beneficial. Please contact the Aviation Department Noise Office with questions regarding this report or any other matter related to aircraft noise and the City’s Airport System.

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**“24/7 Noise Hotline” 844-244-743**