

PHX DVT BYR

 CITY OF PHOENIX AVIATION DEPARTMENT

**Annual Noise Report
2013**

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Executive Summary

This report summarizes annual trends on issues regarding noise exposure from the City of Phoenix's three airports, Phoenix Sky Harbor International (PHX), Phoenix Deer Valley (DVT), and Phoenix Goodyear (GYR) for calendar year 2013. The report includes information on operational counts, aircraft fleet mix, noise complaints, runway usage, noise abatement procedures, noise monitoring, and General Aviation activity.

The City of Phoenix is dedicated to minimizing noise exposure to surrounding communities from aircraft operations through a variety of outreach efforts. Airport staff meets regularly with community groups, elected officials, appointed advisory boards, airline officials, Community Noise Reduction Program consultants, aviation working groups, the Federal Aviation Administration (FAA), and other aviation users in a continued effort to increase awareness of the importance for all aircraft operators to fly in a neighborly fashion.

One of the goals of this report and our outreach is to share information with the public and to encourage further communication between all parties involved regarding the issue of noise exposure.

Calendar Year 2013 Highlights:

In 2013, aircraft operations decreased at Phoenix Sky Harbor International Airport by 3.11% from 450,204 operations to 436,184 operations. Phoenix Deer Valley Airport handled 354,995 operations in 2013, compared to 365,432 operations in 2012. Phoenix Goodyear Airport handled 120,655 operations in 2013, compared to 144,172 operations in 2012.

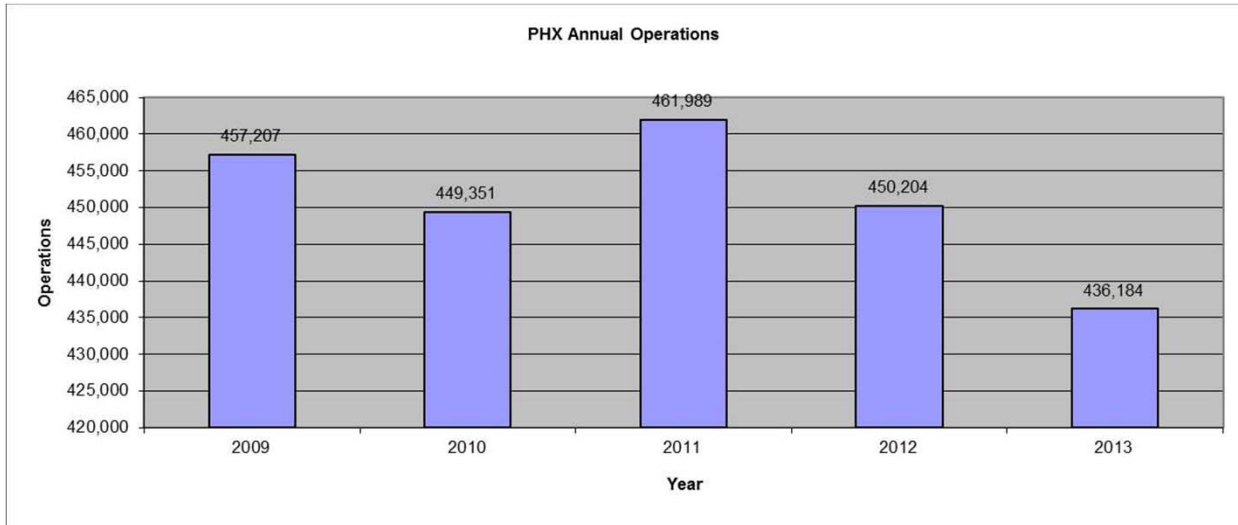
In 2013, Phoenix Sky Harbor International Airport operated in a westerly flow 53.94% of the year and 46.06% easterly for the year, and is largely attributed to the wind direction in the valley throughout the year.

In 2013, compliance with the 4 DME Departure Procedure was 97.69%. This high compliance rate can be attributed to the long history of communications between the Aviation Department, the FAA, aircraft operators, and the community.

The City of Phoenix Aviation Department received 221 complaints from 45 households in 2013 regarding Phoenix Sky Harbor International Airport, 45 complaints from 29 households regarding Phoenix Deer Valley Airport operations and 3 complaints from 3 households regarding Phoenix Goodyear Airport operations.

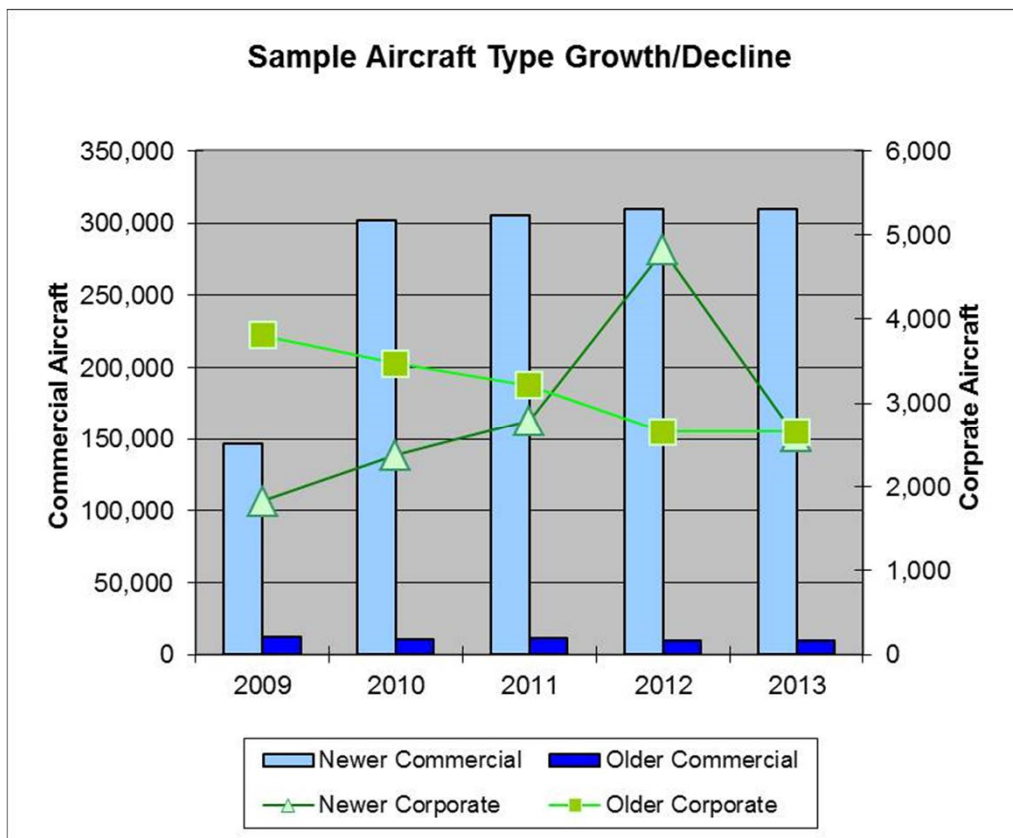


Historical Annual Operations and Fleet Mix Comparisons



Source: FAA OPS ATADs

Operations at Phoenix Sky Harbor International Airport decreased 3.11% in 2013.



Examples of Aircraft sampled:
 Commercial: True Stage III and IV aircraft (Newer Boeing and Airbus jets) compared to older hush kitted aircraft (Boeing 727, MD80's)
 Corporate: Newer Citation and Embraer Aircraft compared to older Lear Jets

The aircraft fleet mix continues to change as older aircraft are replaced with newer, quieter and more efficient ones. The major changes in PHX Fleet Mix in 2013 were a dramatic increase in A321 operations, and an increase in A318 operations. A large decrease in B727 operations also occurred in 2013.



Annual Noise Complaints by Jurisdiction

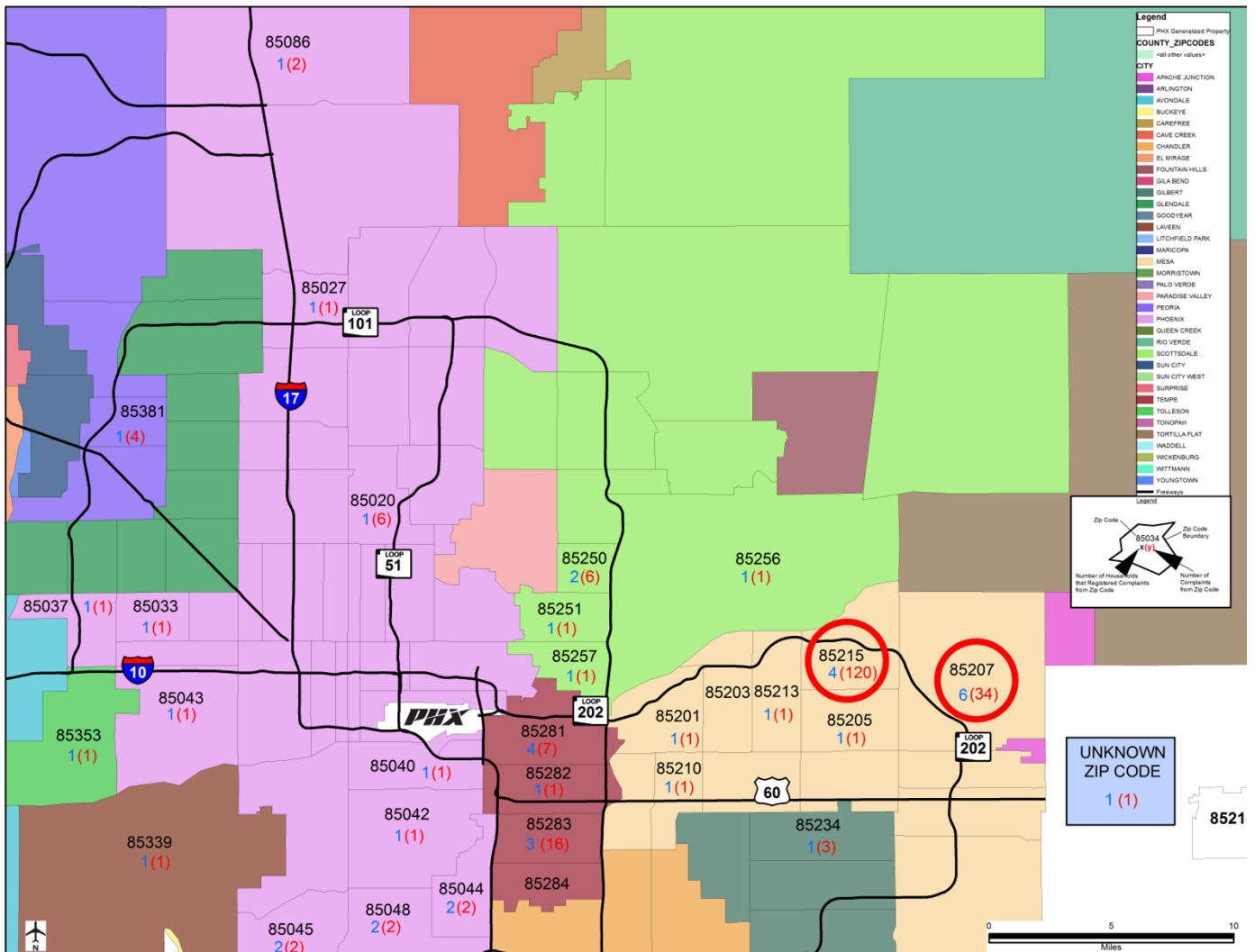
City	2009		2010		2011		2012		2013	
	Households	Complaints	Households	Complaints	Households	Complaints	Households	Complaints	Households	Complaints
Chandler	1	1	1	1	-	-	-	-		
Fort McDowell	-	-	-	-	1	2	-	-		
Fountain Hills	-	-	-	-	-	-	1	1		
Gilbert	4	4	1	1	-	-	-	-	1	3
Glendale	-	-	-	-	1	3	-	-		
Goodyear	-	-	-	-	1	1	-	-		
Mesa	43	217	19	122	9	86	10	67	13	158
Peoria	1	1	-	-	-	-	1	1	1	4
Phoenix	14	17	20	35	20	22	13	16	16	22
Scottsdale	5	1,287	6	9	4	5	4	7	3	7
Tempe	14	21	14	23	9	10	9	10	10	26
Unknown									1	1
Totals:	82	1,548	61	191	44	129	38	102	45	221

In 2013 households registering complaints regarding Phoenix Sky Harbor International Airport increased from 38 to 45. Additionally, noise complaints increased from 102 in 2012 to 221 in 2013.

While the Aviation Department received 221 noise complaints in 2013, three households from Mesa registered 148 complaints. These three households represented 67% of the total complaints regarding Phoenix Sky Harbor International Airport operations.



2013 Noise Complaints by Zip Code

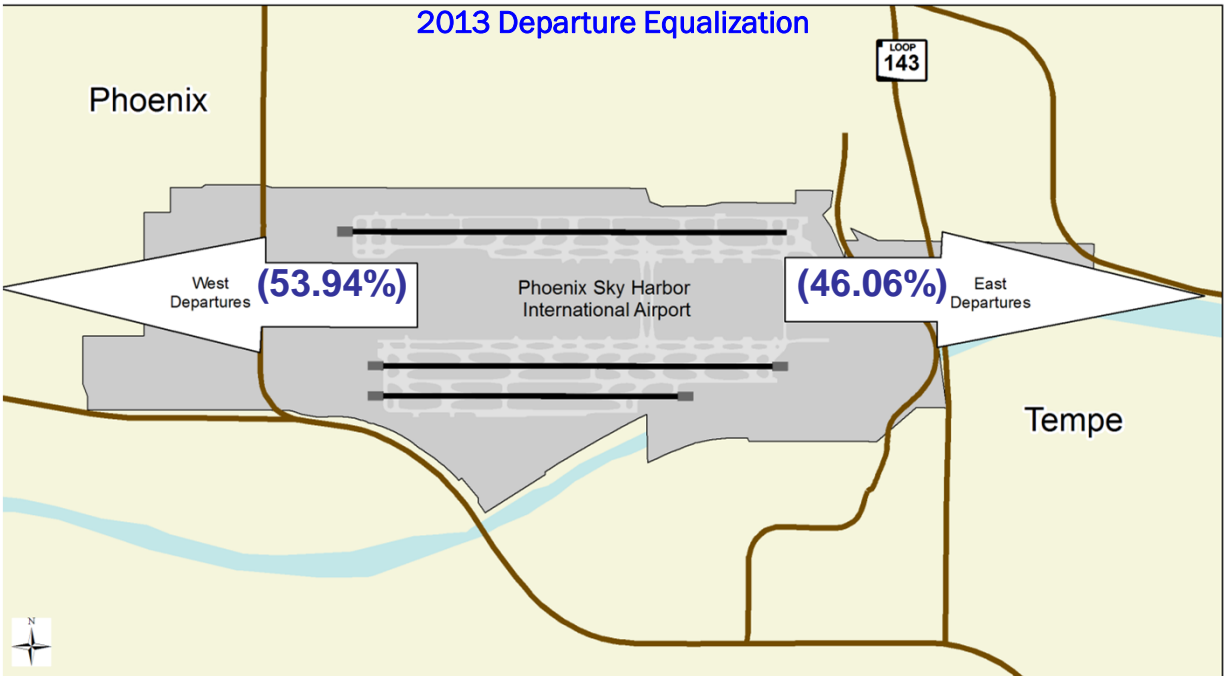


ZIP CODES WITH HIGHEST COMPLAINT TOTALS

- 3 households registered 148 noise complaints from zip codes 85215 and 85207.

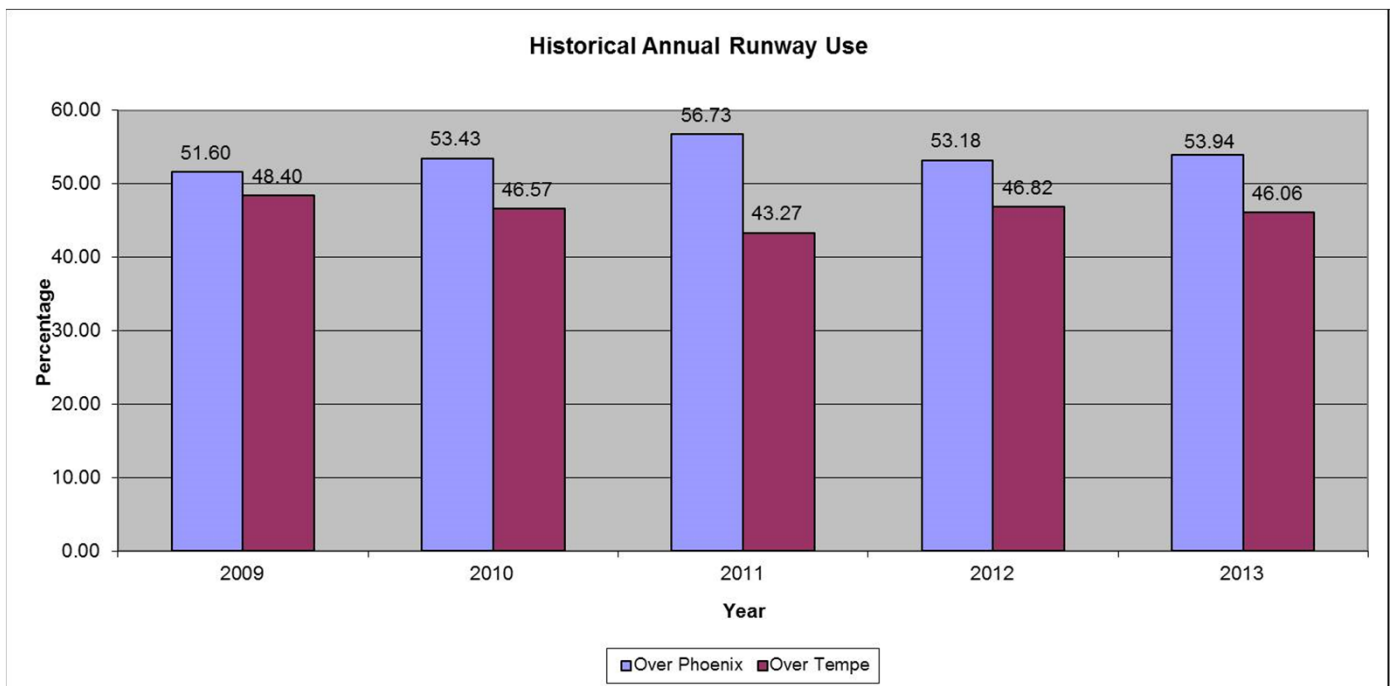


2013 PHX Runway Utilization

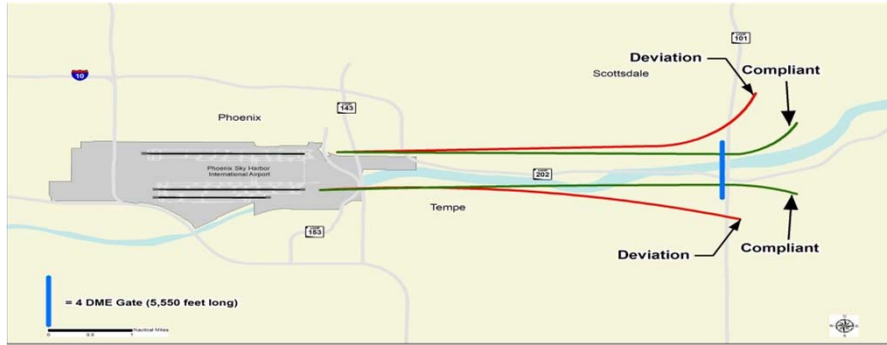


Due to aircraft having to depart into the wind, runway use at Phoenix Sky Harbor International Airport is generally predictable with consistent winds. At Phoenix Sky Harbor International Airport, winds generally flow east to west at night and, by mid-morning, flow west to east, caused predominantly by solar radiation.

In addition to the favorable wind conditions for equalization of runway use, Aviation Department staff communicates its importance with local FAA officials. Runway equalization helps even the distribution of noise exposure in the surrounding communities.



2013 4 DME Departure Procedure Compliance



2013 4 DME Compliance: 97.69%

2009	2010	2011	2012	2013
98.03%	98.33%	98.25%	97.08%	97.69%

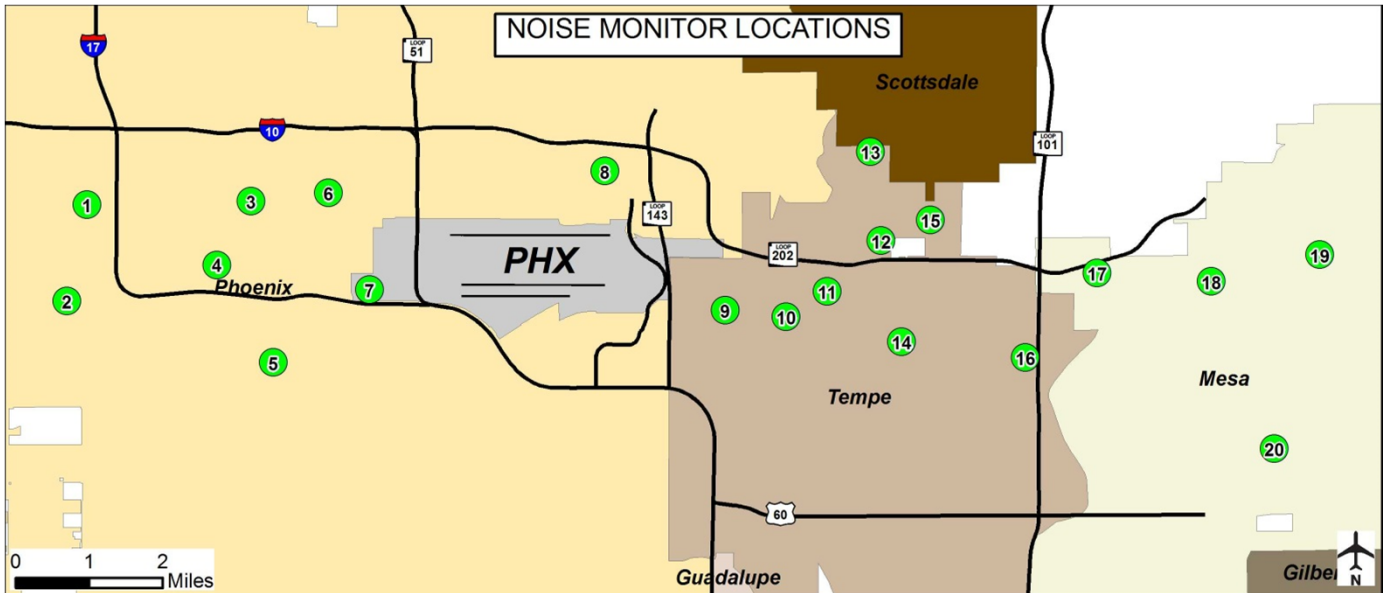
All jet aircraft departing from Phoenix Sky Harbor International Airport to the east are directed to fly generally along the Salt River for 5 miles before conducting their turns. This procedure is designed to keep aircraft over the Salt River area and minimize noise exposure to residential areas. The Aviation Department monitors compliance with this procedure and communicates regularly with FAA and aircraft operators to ensure that the procedure is adhered to when airspace demands and safety allow.

The 4 DME Procedure continues to be one of the most vital components to the Aviation Department's commitment to reducing noise exposure.

Airline Code	Airline Name	Deviations	Total Departures to the East	% Compliance
BAW	British Airways	0	72	100.00
BJS	Business Jet Solutions	0	12	100.00
SCX	Sun Country Airlines	0	121	100.00
WJA	West Jet	0	448	100.00
ACA	Air Canada	1	321	99.69
ASA	Alaska Airlines	7	1,201	99.42
DAL	Delta Airlines	27	3,971	99.32
UAL	United Airlines	23	3,368	99.32
USA	US Airways	474	36,134	98.69
HAL	Hawaiian Airlines	6	302	98.01
SWA	Southwest Airlines	515	25,846	98.01
JBU	Jet Blue Airways	4	195	97.95
FDX	FedEx Express	20	903	97.79
ABX	Airborne Express	7	293	97.61
FFT	Frontier Airlines	22	835	97.37
SKW	Skywest Airlines	359	9,542	96.24
Total			83,564	
Operators under 96% Compliance				
NKS	Spirit Airlines	6	142	95.77
AAL	American Airlines	133	2,740	95.15
SWQ	Swift Air	1	18	94.44
UPS	United Parcel Service	46	729	93.69
BSK	Miami Air International	2	20	90.00
VOI	Volaris	2	20	90.00
CTF	Cutter Aviation	13	108	87.96
USC	US Check	7	58	87.93
KFS	Kalitta Charters	1	8	87.50
OPT	Flight Options	8	60	86.67
GA	General Aviation	278	1,911	85.45
FIV	Citation Shares	5	26	80.77
EJA	Express Jet Airlines	89	433	79.45
LXJ	Bombardier Business Jets	3	14	78.57
AJI	Airstar Charters	2	8	75.00
EJM	Executive Jet Management	5	20	75.00
AAY	Allegiant Air	2	5	60.00
Total			6,320	



2013 Noise Monitoring Site Measurements



The Aviation Department has 20 Noise Monitoring Terminals (NMT) in the vicinity of Phoenix Sky Harbor International Airport. The NMTs are able to determine exactly how loud aircraft operations were at a particular location. In 2009, all monitors were replaced. The new state-of-the-art monitors utilize DSL and wireless communications which are less susceptible to communication failures than the analog phone lines used in the older monitors.

It is important to note that a change in 3 decibels is commonly recognized as the smallest increase in noise exposure that is audible to the human ear.

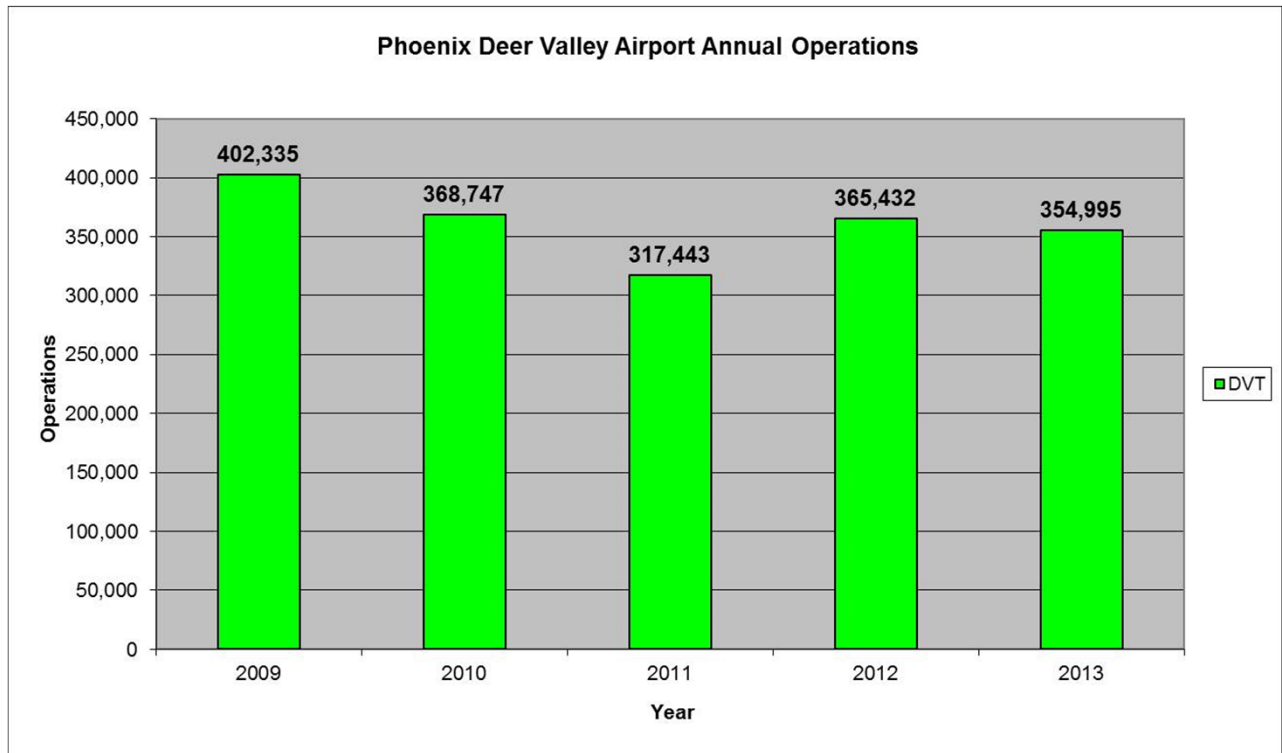
In 2013 NMT 17 was deactivated to allow for the construction of the new Chicago Cubs Spring Training Facility in Mesa. The monitor will be re-activated when construction is completed.

Noise Monitoring Site	2009	2010	2011	2012	2013
NMS01	48.2	50.6	50.3	49.6	50.3
NMS02	52.7	54.7	55.0	55.6	54.7
NMS03	52.9	54.4	53.3	52.1	53.2
NMS04	55.9	58.6	59.3	59.1	59
NMS05	53.3	55.3	55.3	55.1	53.8
NMS06	45.4	48.5	46.4	46.6	37.3
NMS07	66.2	67.4	67.6	67.4	66.7
NMS08	44.6	44.2	47.2	45.3	44.6
NMS09	61.3	63.2	63.7	61.7	63
NMS10	55.5	57.4	57.7	56.8	53.4
NMS11	62.5	63.8	64.5	64.1	61.3
NMS12	59.1	61.4	61.1	60.9	60.4
NMS13	41.7	43.5	42.1	41	40.2
NMS14	44.2	44.5	44.7	44.4	44.2
NMS15	53.2	55.8	55.3	54.7	55.4
NMS16	41.3	42.1	42.2	41.9	41.7
NMS17	51.4	54.1	54.3	54.1	N/A
NMS18	47.4	51.5	49.9	49.2	48.3
NMS19	45.6	48.7	46.5	45.9	46
NMS20	42.8	44.6	43.2	44.3	43.4



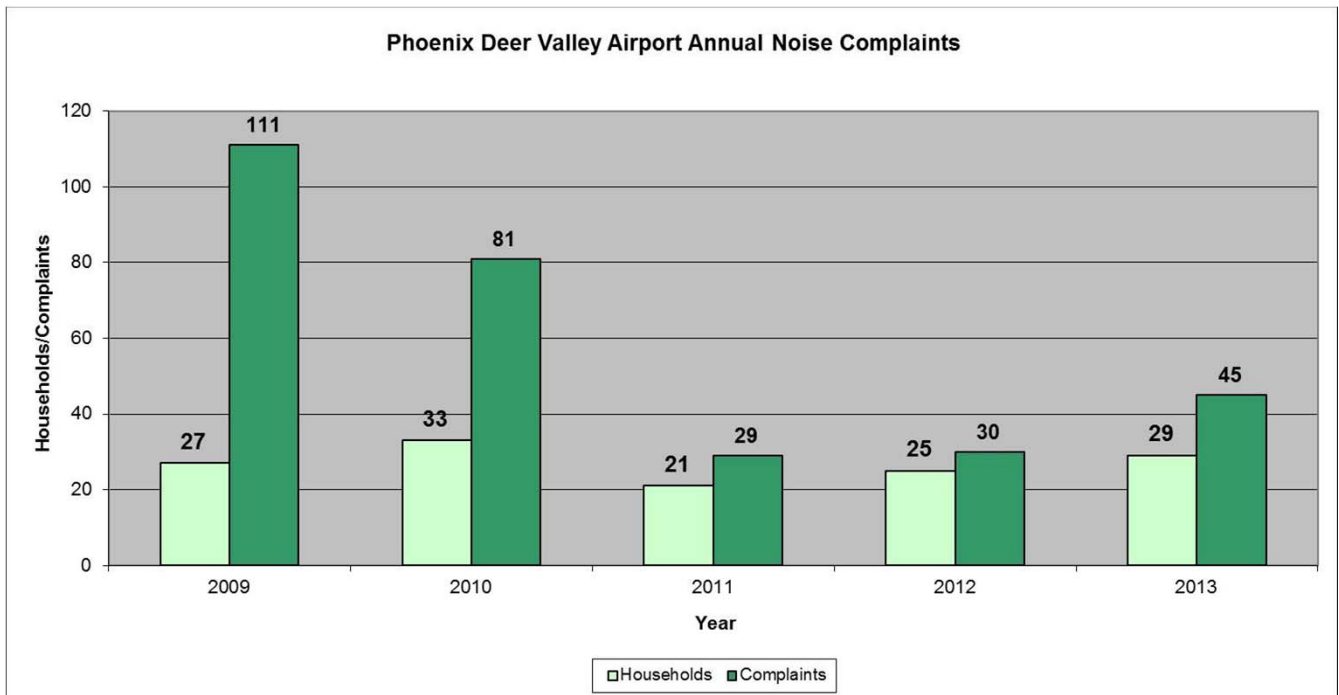
Phoenix Deer Valley Airport Operations and Noise Complaints

Operations at the General Aviation airports owned and operated by the City of Phoenix (Phoenix Goodyear and Phoenix Deer Valley Airports) decreased in 2013. Noise complaints and households registering complaints showed a moderate increase from 2012 levels.



Source: FAA OPS ATADs

Phoenix Deer Valley Airport 2013 Monthly Operations													
Month	Jan.	Feb.	Mar.	Apr.	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
DVT	27,411	30,170	35,412	32,261	32,499	26,107	27,062	29,004	29,687	33,165	27,964	24,253	354,995



Phoenix Goodyear Airport Operations and Noise Complaints



Source: FAA OPS ATADs

Phoenix Goodyear Airport 2013 Monthly Operations													
Month	Jan.	Feb.	Mar.	Apr.	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
GYR	11,533	10,662	14,076	12,325	10,705	10,172	9,139	12,095	9,481	7,360	6,046	7,061	120,655

