

Tempe Aviation Commission

Engineering & Transportation Conference Room, Garden Level
City Hall Complex 31 East 5th Street, Tempe, Arizona

Tuesday, January 14, 2020

6:30 p.m.

AGENDA

1. **Call to Order** with Introduction of new members.
2. **Public Appearances**; the Tempe Aviation Commission welcomes public comments at this time. The Commission may not respond to public comments unless the topic has been placed on the agenda. There is a *three-minute time limit* per citizen.
3. **Election of Officers**, election of Chair and Vice Chair for 2020.
4. **Consideration of Meeting Minutes (December 10, 2019)**; for discussion and approval.
5. **Update from the City of Phoenix Aviation Department**; for information and discussion.
6. **2019 Annual Report**, for information and discussion.
7. **Commissioners' Business**; suggestions for future agenda items.
8. **Schedule Next TAVCO Meeting**.
9. **Adjournment**.

According to the Arizona Open Meeting Law, the Aviation Commission may only discuss matters listed on the Aviation Commission's agenda. The City of Tempe endeavors to make all public meetings accessible to persons with disabilities. With 48 hours advance notice, special assistance is available at public meetings for sight and/or hearing-impaired persons. Please call 350-2905 (voice) or 350-2750 (TDD) to request an accommodation to participate in this meeting. Parking information is available at <http://www.millavenue.com/go/tempe-community-council>. For public transportation route and schedule information, please visit www.valleymetro.org or call 602-253-5000.

Minutes Tempe Aviation Commission December 10, 2019

Minutes of the Tempe Aviation Commission meeting held on December 10, 2019, 6:30 p.m., at the Engineering & Transportation Conference Room, Garden Level, City Hall Complex, 31 E. Fifth Street, Tempe, Arizona.

(MEMBERS) Present:

Lane Carraway (Vice Chair)
W. David Doiron
Shannon Dutton
Gordon Gauss
Trevor Pan (on phone)

(MEMBERS) Absent:

Valeriy Khaldarov
John Q. Nunes
Peter Schelstraete (Excused)

City Staff Present:

Oddvar Tveit, *Environmental Quality Specialist, City of Tempe*

Agenda Item 1 – Call to Order

Vice Chairman Lane Carraway called the meeting to order at 6:30 p.m.

Agenda Item 2 – Public Appearances

There were no public appearances.

Agenda Item 3 – Consideration of Meeting Minutes (November 12, 2019)

Mr. Carraway asked for any changes or modifications and a motion to approve the drafted November 12, 2019 meeting minutes.

Motion: Ms. Dutton moved to approve the minutes as drafted. The motion was seconded by Mr. Doiron.

Action: The motion to approve the drafted October 8, 2019 meeting minutes passed by a unanimous vote. Ayes: Mr. Carraway, Mr. Doiron, Ms. Dutton, Mr. Gauss, and Mr. Pan. Abstentions: None. Nays: None. Absent: Mr. Khaldarov, Mr. Nunes, and Mr. Schelstraete.

Agenda Item 4 – FAA Letter of Invitation

Mr. Tveit explained that a motion passed at the November meeting to accept the drafted letter of invitation with the changes proposed by members at the meeting. A revised letter was distributed prior to the meeting. Mr. Carraway asked about any additional suggestions for changes to the revised draft.

Discussion: If the FAA accepts the invitation to attend one of the Commission's meetings, the meeting should be announced twice in Tempe Today.

Motion: Mr. Doiron moved to accept the revised letter as drafted. Mr. Gauss seconded the motion.

Action: The motion to approve the letter of invitation to the FAA to participate at one of the commission's meetings passed by a unanimous vote. Ayes: Mr. Carraway, Mr. Doiron, Ms. Dutton, Mr. Gauss, and Mr. Pan. Abstentions: None. Nays: None. Absent: Mr. Khaldarov, Mr. Nunes, and Mr. Schelstraete.

Agenda Item 5 – Candidates for 2020 Officer Positions

Mr. Carraway asked for nominations for the position of Chair to be elected at the first meeting in 2020. He proposed himself as candidate. The nomination was seconded by Mr. Doiron. No other nominations were made for the office of commission Chair for 2020. Mr. Carraway proceeded by asking for nominations for the office of Vice Chair. Mr. Gauss nominated Mr. Pan for the office. Mr. Carraway seconded the nomination of Mr. Pan for the office of commission Vice Chair. Mr. Pan accepted being nominated and the potential of being selected to the office of Vice Chair in 2020.

Mr. Tveit announced the City Council would be doing appointments and reappointments to city boards and commissions at the December 12, 2019 regular council meeting. It includes filling the open vacancy after Mr. Robert J. Dixon and replace outgoing members Ms. Dutton and Mr. Gauss. Mr. Doiron and Mr. Schelstraete are to be reappointed.

Agenda Item 6– Commissioners' business

- New members introductions if in attendance.
- Invite Phoenix Aviation for an update on activities.
- Pending any candidate additions, conduct selections for the office of Commission Chair and Vice Chair.

Agenda Item 7– Schedule next TAVCO meeting

The next meeting was scheduled for January 14, 2020.

Agenda Item 8 – Adjournment

Motion: Mr. Doiron thanked Ms. Shannon Dutton and Mr. Gordon Gauss for serving on the commission and moved to adjourn the meeting. Mr. Gauss seconded the motion.

Action: The meeting was adjourned at 6:47 p.m. by a unanimous vote. Ayes: Mr. Carraway, Mr. Doiron, Ms. Dutton, Mr. Gauss, and Mr. Pan. Abstentions: None. Nays: None. Absent: Mr. Khaldarov, Mr. Nunes, and Mr. Schelstraete.

Prepared by: Oddvar Tveit

Reviewed by: Christina Hoppes

2019

PHX East Annual Summary

Inventory :

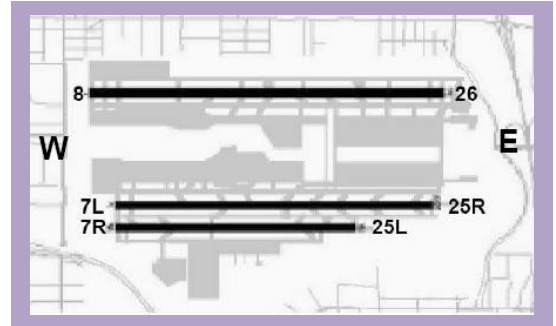
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Report prepared for the
Tempe Aviation Commission - TAVCO
by the City of Tempe
255 East Marigold Lane
Tempe, AZ 85281



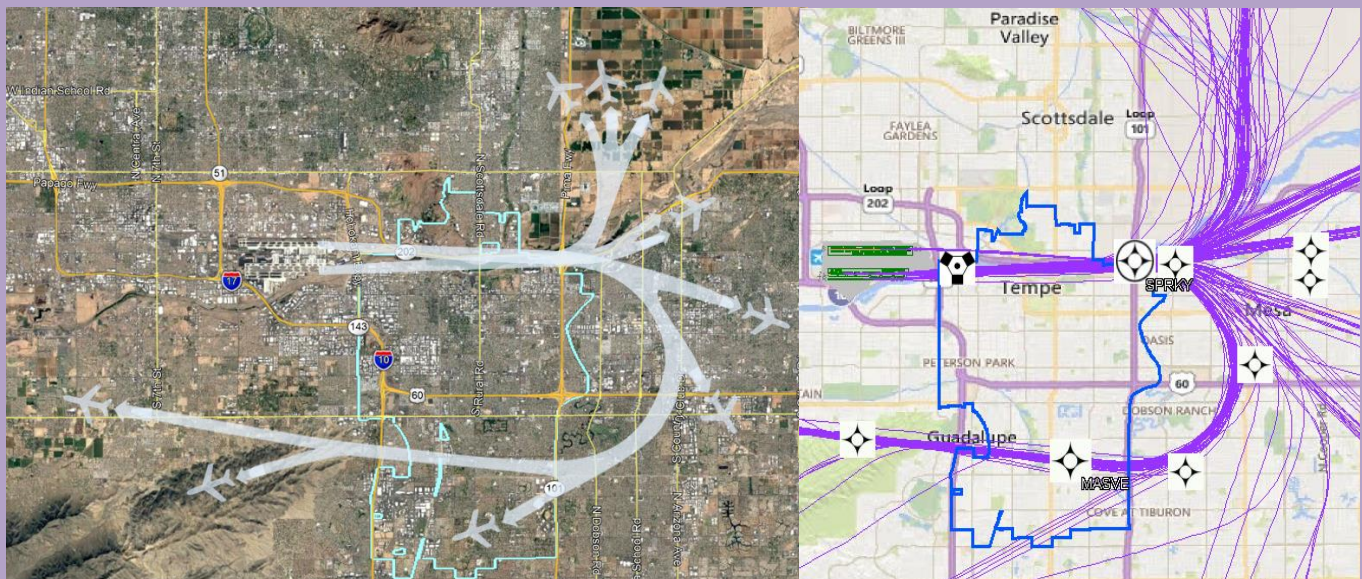
1. Introduction

This summary is an annual account for the Tempe Aviation Commission (TAVCO) of how aircraft operations at Phoenix Sky Harbor International Airport complied with noise mitigation flight procedures over the City of Tempe. TAVCO consists of nine Tempe residents appointed by the Tempe Mayor with approval of the Tempe City Council to assist and give advice on how to deal with airport operation impacts on Tempe residents and the implementation of a 1994 intergovernmental agreement with the City of Phoenix to mitigate noise impacts from jet and large turboprop aircraft over Tempe. The City of Tempe is located directly east of the Phoenix Sky Harbor International Airport.



The airport is owned and operated by the City of Phoenix and expanded in October 2000 with a third parallel runway (7R/25L). The following two noise mitigation flight procedures remain in place after the FAA in 2002 suspended the implementation of a side step visual approach procedure to the new runway which was a third flight procedure included in the 1994 agreement:

- The 4-DME Standard Instrument Departure procedure to keep east departing jet and large turboprop aircraft over the Salt River/Tempe Town Lake area before they make turns towards their route destinations.
- Annual equalization of all jet and large turboprop aircraft departures east and west of the airport during daytime and nighttime hours.

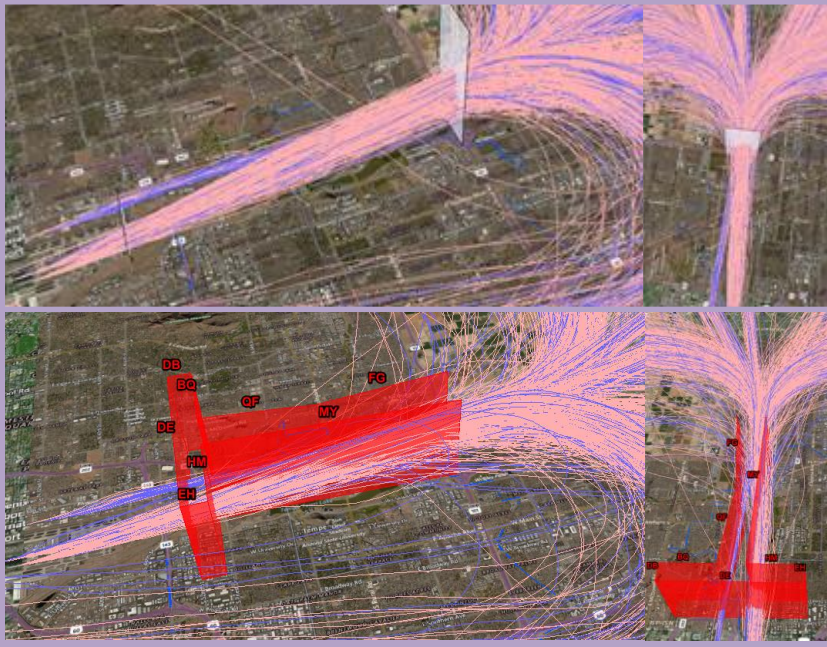


On September 18, 2014 the FAA introduced new satellite-based Area Navigation (RNAV) Standard Instrument Departure (SID) routing for PHX. The number of PHX RNAV SIDs was expanded from seven to nine. The east bound SIDs were designed with a GPS navigation waypoint, "SPRKY," located at 4-DME. Routes that turn departing jets back west south of the airport to California destinations a GPS navigation waypoint, "MASVE," was established over Kyrene Los Niños Elementary School in South Tempe.

The routing of east bound jet departures over the "SPRKY" waypoint has improved overall airline departure compliance with the 4-DME noise mitigation flight procedure over North Tempe. The "MASVE" waypoint has concentrated a larger volume of departures over neighborhoods under a narrower flight corridor in South Tempe. The area is also impacted by a busy flow of descending jets coming in over the South Mountain Park from the west.

2. East Departure Compliance

Under the 1994 intergovernmental agreement a system of fixed noise monitors and monitoring of flight tracks, was installed to track noise and how aircraft manage to keep within the Salt River/Tempe Town Lake area on departure towards the east. The City of Phoenix included an imaginary vertical gate in the Airport Noise & Operations Monitoring System (ANOMS) at 4-DME that all east departing jet aircraft need to pass through to stay in compliance with the agreement. TAVCO proposed several imaginary gates creating a “Corridor”, which was based on Standard Instrument Departure (SID) procedures in use when the agreement was made in 1994.



The PHX 4-DME Gate is shown in white.

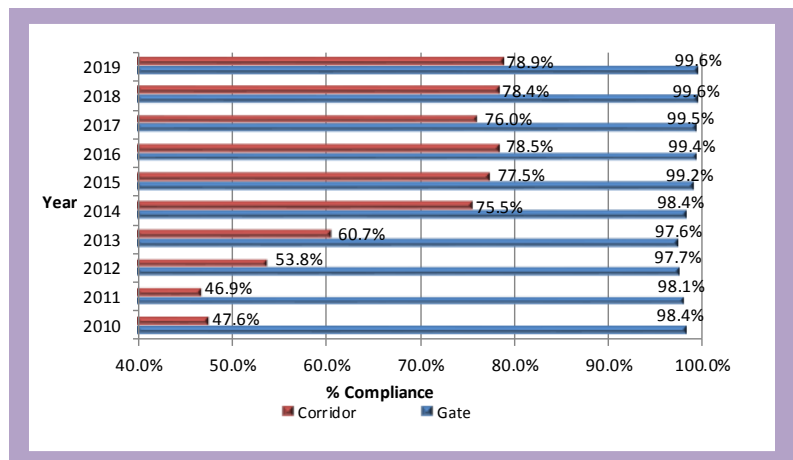
The red gate system is used in the TAVCO report to identify airlines that fail to stay over the riverbed when departing over north Tempe.

TAVCO’s proposal was endorsed by the Tempe City Council but rejected in favor of an exit gate by the City of Phoenix when the system was established back in 1996-97. Large turboprop aircraft departures are routinely routed outside the 4-DME gate on diagonal headings; 120° towards the southeast and 60° towards the northeast to keep them out of the paths used by the faster jet aircraft.

Compliance Rates

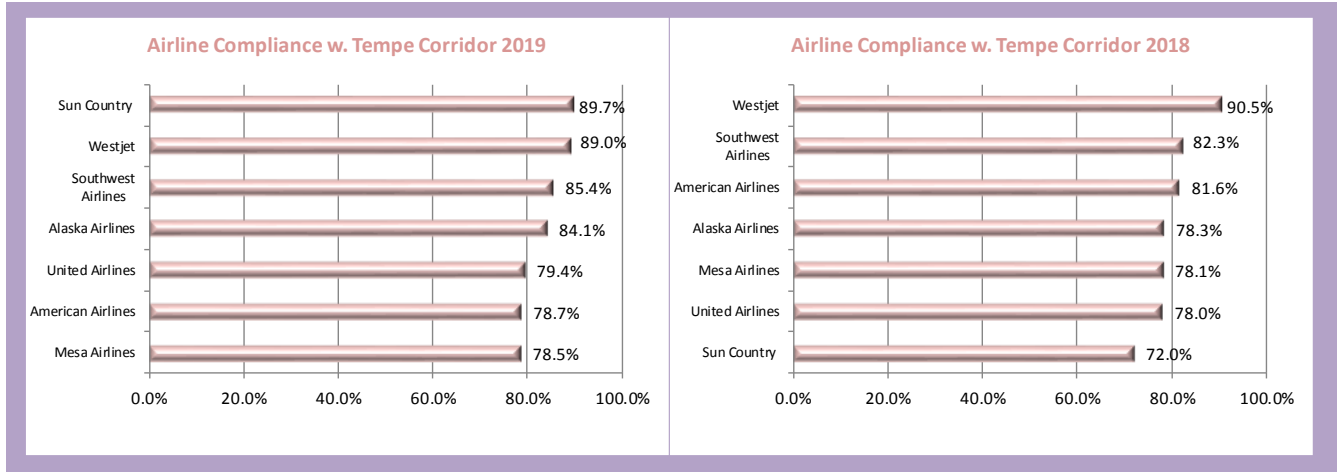
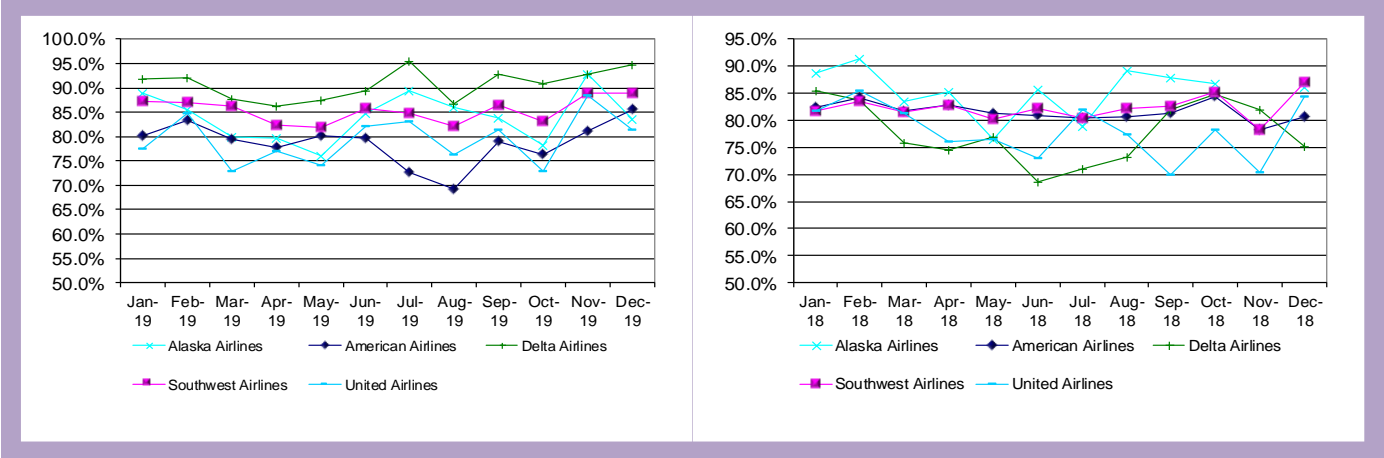
The annual average compliance rates are based on monthly numbers from the TAVCO Noise Mitigation Monitoring Reports. Typically, cross winds of 10 knots or more has been used to filter out deviations due to weather.

The volume of jet and large turboprop departures towards the east during daytime decreased 5.9% in 2019 reaching 71,385. Night-time departures increased 6.9% reaching 14,006. In total jet and large turboprop departures and arrival operations east of the airport decreased 1.2%.



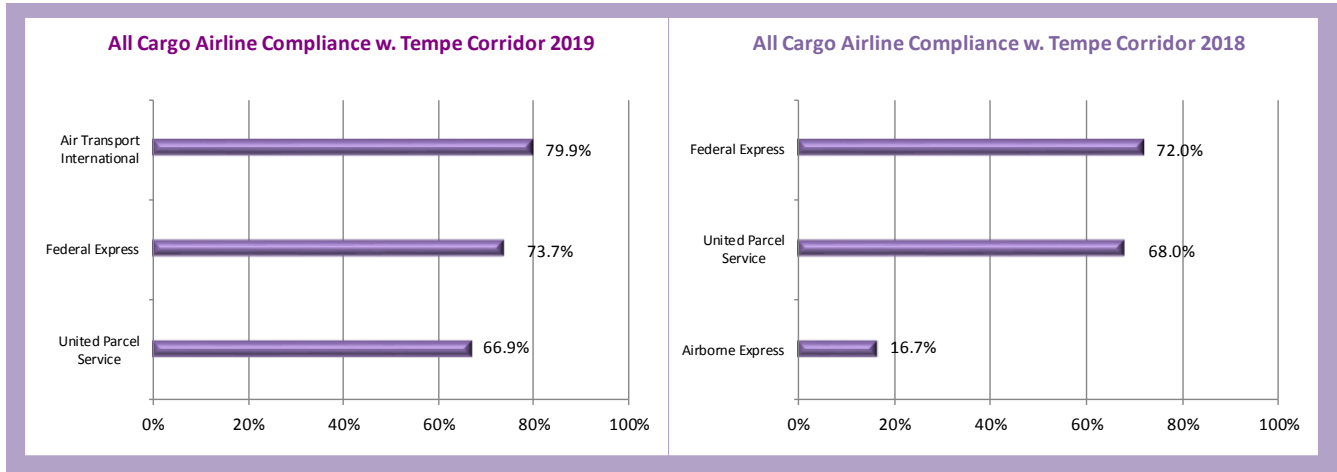
Large Carrier Compliance

The graph shows corridor compliance rates for some of the airport's busiest airlines. Only airlines with on average ≥ 10 departures to the east per month are included.



Top All Cargo Carriers

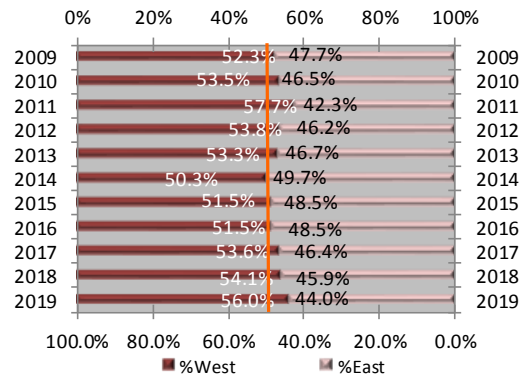
All cargo carriers have on average somewhat lower compliance rates with the Tempe Corridor than the average performing passenger carrier.



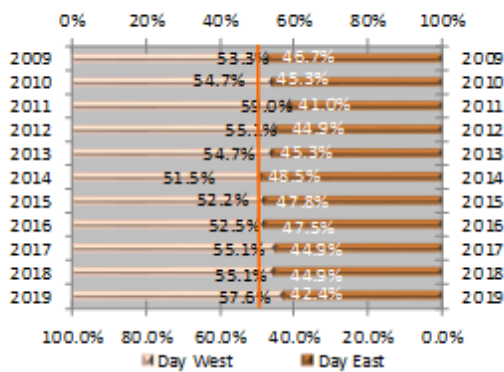
3. East/West Equalization

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 day- and day nighttime hours. The most of these operations goes towards the west when both day- and nighttime hours are combined. Departure traffic during the night and early hours of the day is predominantly going towards the east.

Annual Equalization (Day&Night)

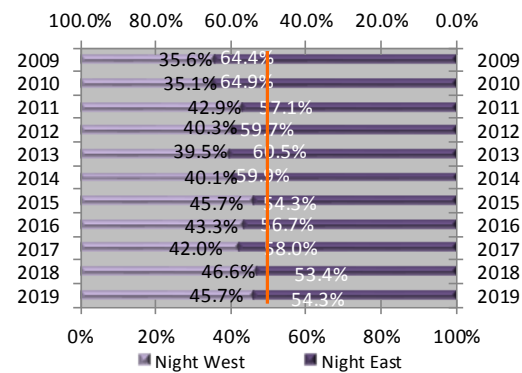


Day Equalization



Day = 7: 00 a.m. to 10:00 p.m. local time

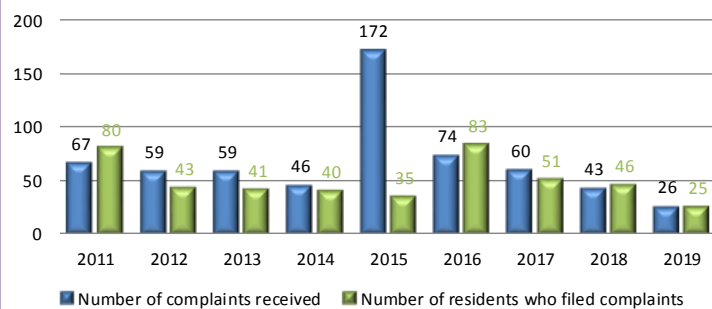
Night Equalization



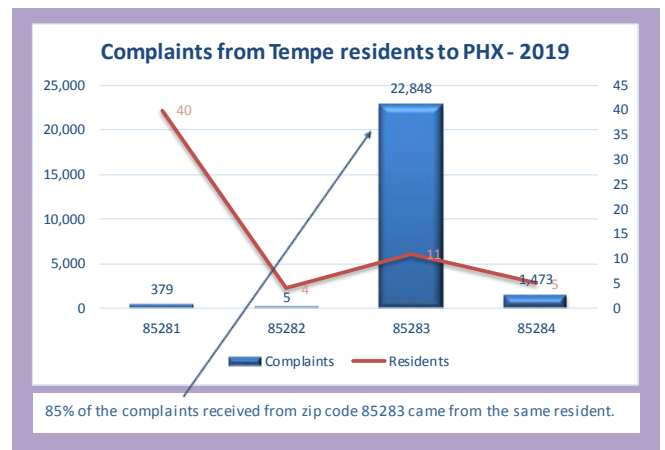
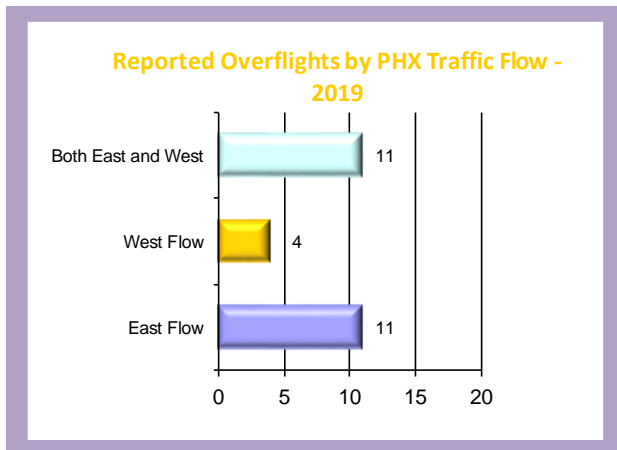
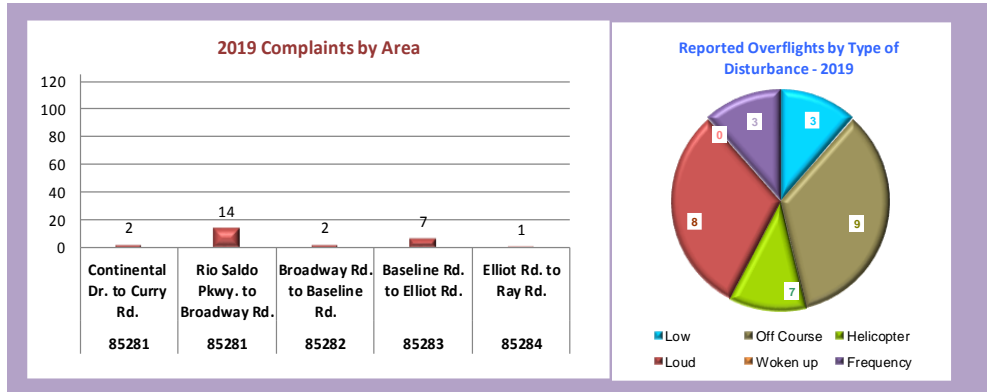
4. Noise Complaints

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. Most of the complaints on airline traffic have traditionally come from residents living in north Tempe neighborhoods where aircraft are flying at lower altitudes, but has expanded to areas of central and south Tempe where residents are living under flights paths with more efficient air traffic flow after implementation of area navigation (RNAV) and Required Navigation Performance (RNP) flight procedures used by the larger airlines.

Number of Aircraft Complaints Received by the City of Tempe

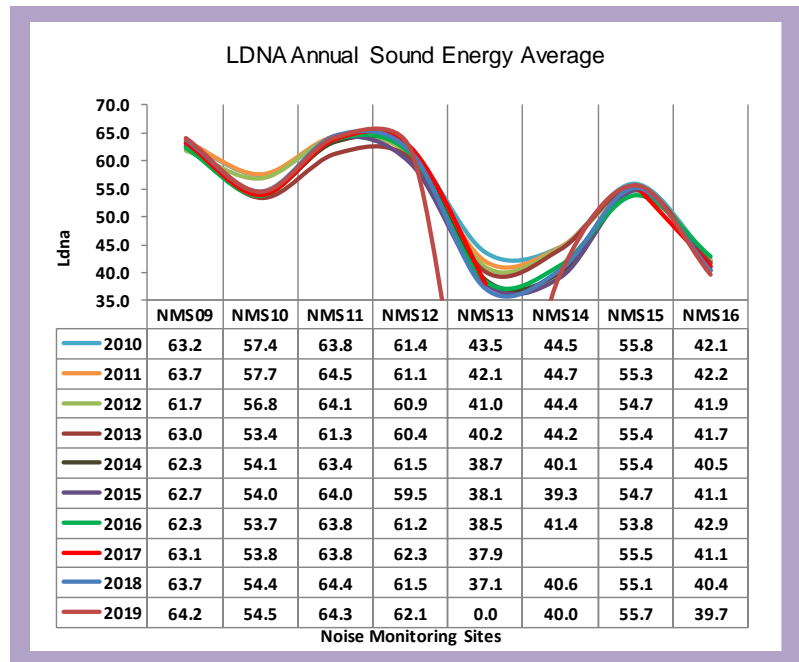


Complaints to the City of Tempe about aircraft noise events that include several identified overflights are registered as single complaints with inclusion of each of the identified overflights. Type of disturbance is also registered.

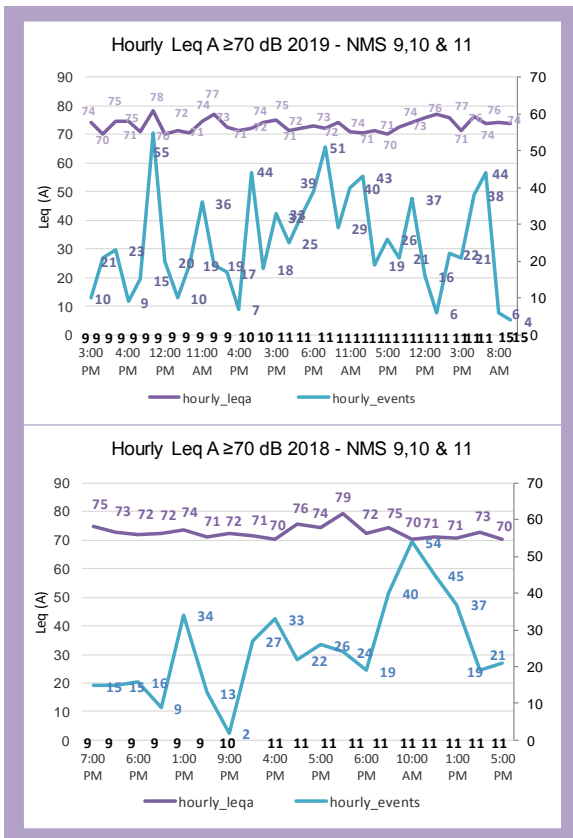


5. Averaged Noise Exposure

Annual (Day-Night) average sound levels, Ldn (A), describes the cumulative noise exposure for an average annual day. Exposure based on noise registered at the fixed monitoring sites operated by the City of Phoenix are compared to previous years exposure. In 2019 NMS 13, which is located close to the City of Scottsdale at N. McAllister Avenue and E. Continental Drive in North Tempe has been off line because of ongoing upgrades made to the monitoring equipment. In 2017 a housing project brought NMS 14 off line.



Eight of the Phoenix Sky Harbor International Airport fixed noise monitoring sites, NMS 9 through 16, are located on the north and south side of the Salt River riverbed in Tempe, all in areas where neighborhoods were covered or in immediate vicinity of the 1992 65 Ldn (A) or Day Night Level (DNL) noise exposure contour. The 65 Ldn (A) contour has shrunk over the years with airlines modernizing their fleets. This is a depiction of the monitoring sites in Tempe with computed noise exposure contours based on operational data from 2018. The 65 Ldn (A) is depicted in red. The 60 Ldn (A) exposure contour, which is depicted in yellow approximately covers the area of the 1999 65 Ldn (A) noise exposure contour.



This is a description of noise based on long-term equivalent level (Leq) where the total sound energy is measured to a time-average. The graph shows a count of equivalent sound levels that exceeded 70 decibels, at which monitoring sites and during which hours of the day those levels were registered.

These high hourly levels occur at monitoring sites located in downtown areas of Tempe where aircraft fly at lower altitudes.