

Tempe Aviation Commission
Tuesday, January 10, 2022
6:30 p.m. – Call to Order

HYBRID

Tempe Public Library, Second Floor Conference Room
3500 S Rural Rd, Tempe, AZ 85282

VIRTUAL

Microsoft Teams meeting, [Click here to join the meeting](#)
Or call in (audio only)
[+1 480-498-8745,,670312203#](#) United States, Phoenix
Phone Conference ID: 670 312 203#

AGENDA

1. **Call to Order**
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. **Consideration of Meeting Minutes October 18;** for discussion and approval.
4. **Aircraft Noise Mitigation Reports;** for discussion
5. **Commissioners' Business;** suggestions for future agenda items.
6. **Schedule Next TAVCO Meeting;** *Tuesday, March 14*
7. **Adjournment.**

According to the Arizona Open Meeting Law, the Commission may only discuss matters listed on the Commission 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 350-8400 (TDD) to request an accommodation to participate in a public 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.

DRAFT Minutes
Tempe Aviation Commission
December 13, 2022

Minutes of the Tempe Aviation Commission meeting – was held virtual Microsoft Teams meeting with call in +1 (480) 498-8745 United States, Phoenix (Toll) Conference ID: 243 160 897# and at the Tempe Public Library, on December 13 2022, 6:30 p.m.

(MEMBERS) Present:

W. David Doiron
Desiree Walker
Karen Apple
Stuart Mitnik
Aaron McBride
Ellen Poole
John Lynch

(MEMBERS) Absent:

Peter Schelstraete
Ed Kucharski

Citizens Present:

None

City Staff Present:

Brianne Fisher, Sustainability and Resilience
Office, City of Tempe

Agenda Item 1 – Call to Order

Mr. Doiron called the meeting to order at 6:32p.m.

Agenda Item 2 – Public Appearances

Mr. Doiron asks if there are any members in the audience looking to make a comment.
There are none.

Agenda Item 3 – Consideration of Meeting Minutes (October 18)

Mr. Doiron asked if anyone had considerations of minutes such as discrepancies or corrections.
Mr. Doiron mentioned that he has a couple of corrections to the meeting minutes from October 18 including the following:

- Under agenda Item 5 – the word “one” is missing the “e”
- Same section, second sentence change “was” to “were”

- Agenda item 6 – the first bullet point capitalize is name and correct the sentence; and “encourages more auto pilot use”
- Agenda item 6 second sentence correct word “temperatures”
- “Plan” not “plane”
- First bullet point on page 5 needs to be corrected for clarity

Chair asks if anyone has any more corrections.

Commissioner Poole moves to approve the meeting minutes with the corrections above, Commissioner Walker seconds.

Unanimous approval.

Agenda Item 4 – Aircraft Noise Mitigation Reports

Chair Doiron turns this item over to Staff Liaison Fisher.

Fisher reports that given TAVCO’s interest, and specifically Member Mitnik’s efforts to pull flight path data on Sky Harbor’s website. Fisher reminds members that TAVCO use to receive very specific information on East Bound Noise Compliance reports that Oddvar T. use to manage.

Fisher states that Sky Harbor is happy to come and give a tutorial to TAVCO members on how to use PublicVue, however they also mentioned that Oddvar did have additional access to PublicVue which allowed him to create the East Compliance Reports. Sky Harbor also offered to create these reports for TAVCO and the City of Tempe in the future. Fisher said she wanted to bring this information forward and discuss the options around this reporting.

Commission Apple states that someone from the City of Tempe should have access to PublicVue. Apple does state that she does trust Sky Harbor staff to provide the reports and data but perhaps we can have both so Tempe staff can get more familiar with the PublicVue data.

Commissioner Poole asks if Staff Liaison Fisher feels comfortable with learning how to pull the data and draft the reports.

Fisher states that she has been having conversations with other department staff that has been assisting in the Rio Salado Development, and there seems to be some consensus around hiring a consultant, at least for the next few years, to ensure everyone is staying compliant to the IGA.

Fisher commits to keeping TAVCO members informed on the progress of the potential of hiring a consultant and move forward with getting access to PublicVue. Fisher also asks members to

review the old reports to assess what information is valuable and what information might be missing from these reports.

Agenda Item 5 – Rio Salado Upcoming Development presentation

Fisher states that she is in contact with the Rio Salado Development team and working to schedule them for January.

Agenda Item 6 – Commissioners Business

Chair Doiron asks if there is anything anyone wants on a future agenda.

Commissioner Apple summarizes for the group some of the items that have already been mentioned in this meeting including:

- SkyHarbor training on PublicVue
- Rio Salado Development
- Assessing East Compliance Noise Reports

Fisher states, at some point later in the new year, we will be working on the event TAVCO wants to hold in November 2023.

Commissioner Apple wants to announce the new car train is doing a soft opening on December 20. Apple says this increases access and eliminates traffic from buses and improve air quality around the area.

Commissioner Poole states that this is her last TAVCO meeting and she thanks the Commissioners and appreciates their hard work on this commission.

Agenda Item 7 – TAVCO Next Meeting

Chair asks if Tuesday, January 10 is next meeting.

Agenda Item 8 – Adjournment

Member Lynch moves to adjourn the meeting. Walker seconds. Unanimous approval.

The meeting adjourned at 7:06 p.m.

Prepared by: Brianne Fisher

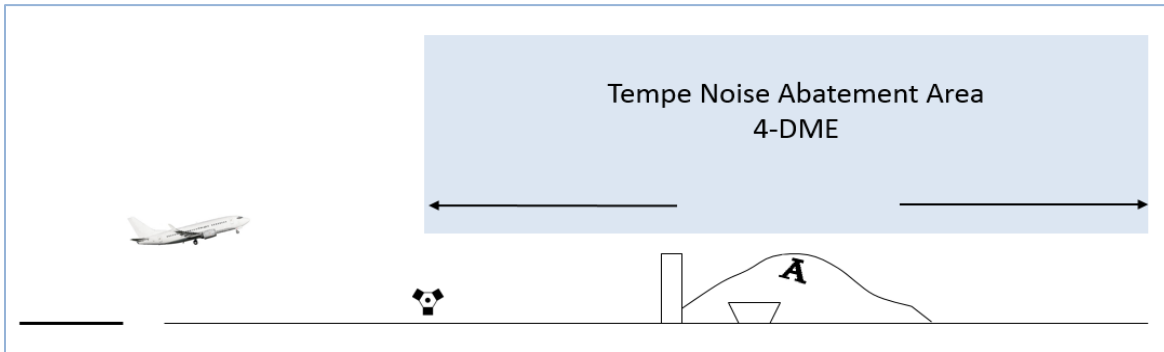
PHX East Compliance Report

Q1, 2021

Introduction

The City of Tempe is located directly east of Phoenix Sky Harbor International Airport (PHX) which is owned and operated by the City of Phoenix.

This report gives an account of how well PHX operations comply with noise mitigation flight procedures over the City of Tempe. The flight procedures are memorialized in an intergovernmental agreement between the two cities, and the Tempe Aviation Commission (TAVCO) is tracking the implementation of the agreement in quarterly reports followed by an annual summary.



The Tempe and Phoenix Intergovernmental Agreement (IGA) requires jet and large turboprop aircraft to stay on headings east within the Salt River (Rio Salado) riverbed and Tempe Town Lake to a distance of 4DME (Distance Measuring Equipment) before diverging to intercept PHX departure routes.

The report uses a different measure than the City of Phoenix to determine jet departure compliance. The airport’s official compliance measure is used in PHX Noise Reports published on-line at <https://www.skyharbor.com/FlightPaths/PHX-NoiseReports>.

Q1, 2021
Tempe
Corridor
Compliance
80.7%

When runways are operated in east flow, the large turboprop aircraft are routinely departed on diagonal headings to the northeast and southeast directly after take-off to avoid having the slower turboprops on the same departure headings as the faster jet.

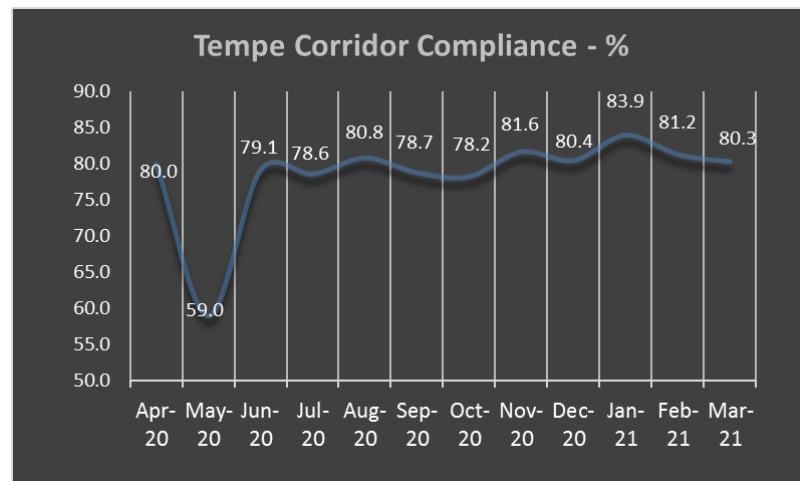
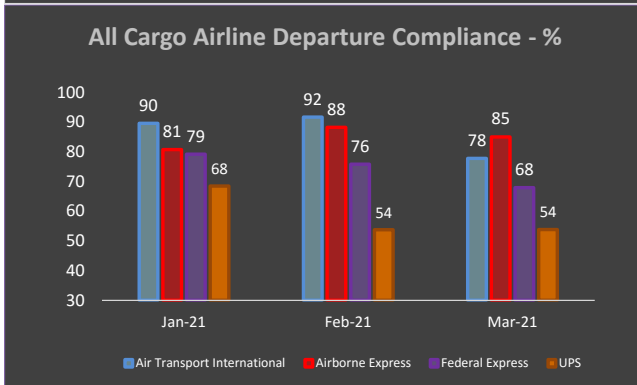
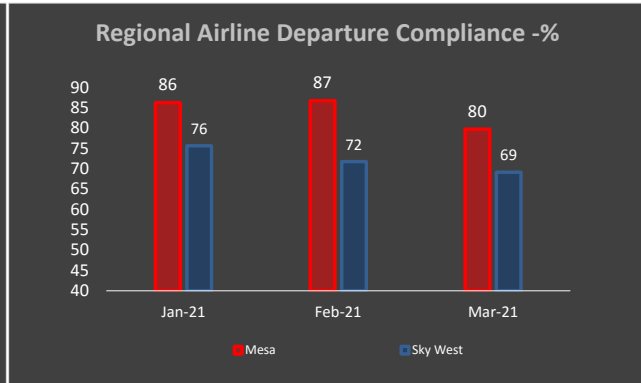
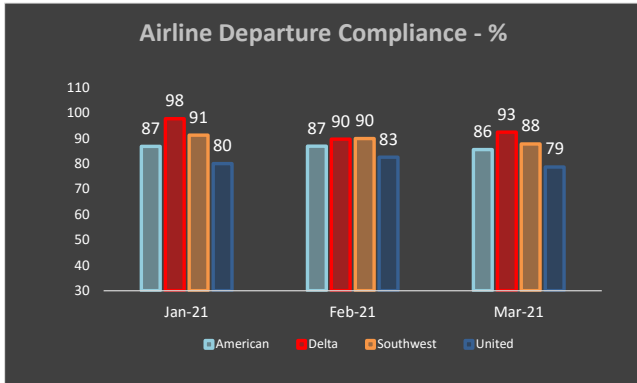


Figure 1: Monthly east departure compliance with Tempe Corridor.



Figures 2, 3 & 4: Tempe corridor departure compliance by selected airlines during the quarter.

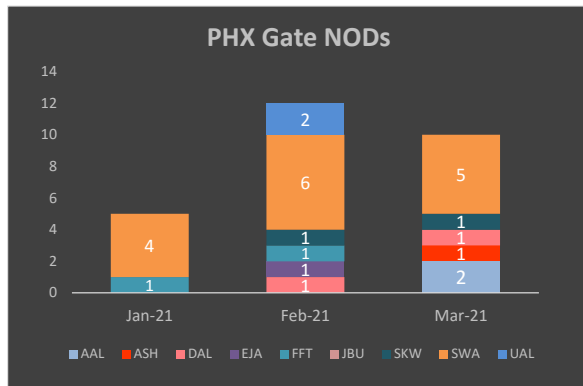


Figure 5: City of Phoenix violation notices to selected airlines.

Airlines with jet departures to the east that fail to pass through the PHX Gate receives e-mail Notices of Deviations (NODs) from the City of Phoenix.

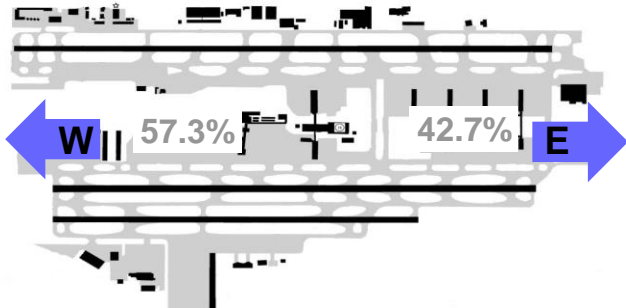
The gate is set up in the PHX Airport Noise & Operations Monitoring System (ANOMS) at 4-DME just west of the SR-202 and SR-101 interchange. It is 1.05 miles wide and runs parallel to the SR-101.





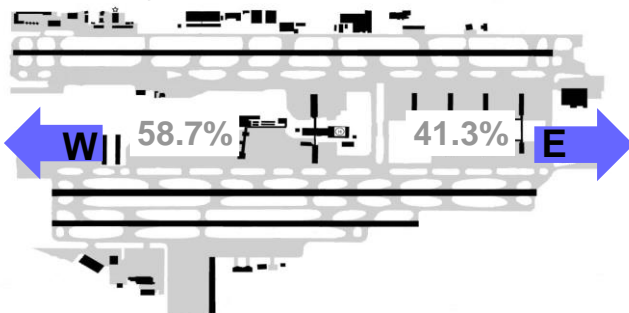
Departure Equalization

Equalization Year to Date

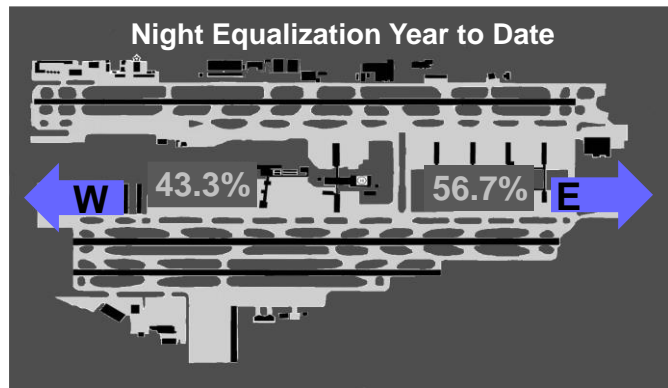


The IGA calls for an even split of the noise burden from departing jet and large turboprop aircraft east and west of PHX parallel runways during daytime and nighttime hours. The FAA is expected to compensate for periodic changes in flight patterns as weather and air traffic allows to accomplish equalization over a twelve-month period.

Day Equalization Year to Date



Night Equalization Year to Date



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

Figures 6, 7 & 8: East and west departure flows by jets and large turboprop aircraft over the last twelve months.

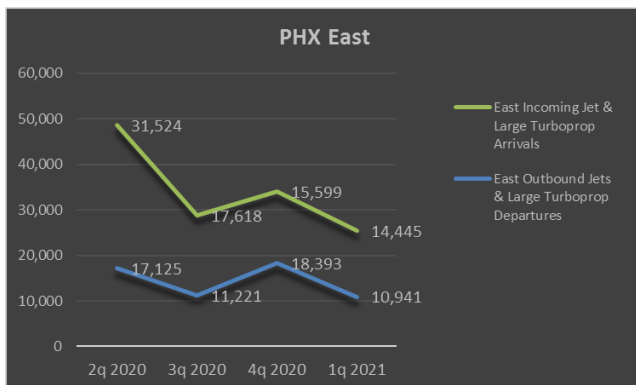


Figure 9: Jet and large turboprop operation volumes on the east side of the airport.

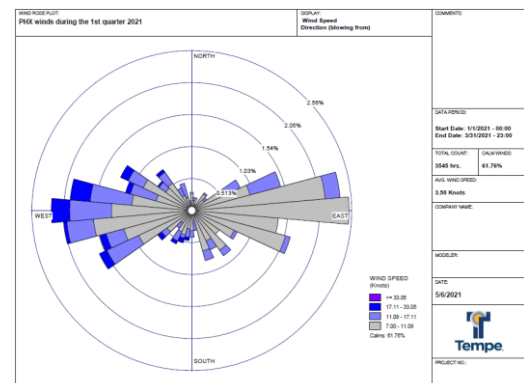


Figure 10: Wind directions and speeds.

The average wind speeds during the quarter was 3.5 knots. The majority of the higher wind speeds came from the west.



Tempe Citizens' Noise Complaints

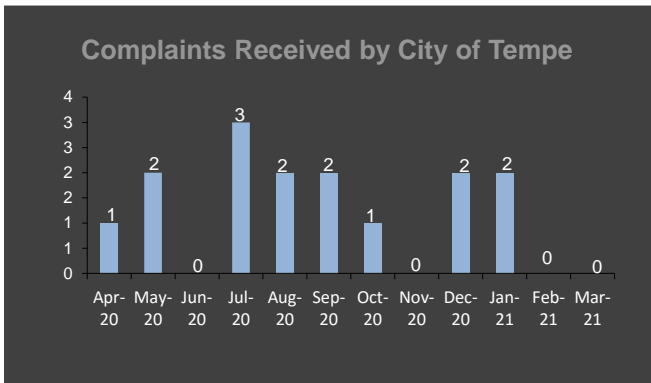


Figure 11: Complaints to City of Tempe over twelve months.

Complaints are recorded as the number of phone calls, voicemails, and electronic messages received from residents calling in or using the Tempe 311 web complaint option.

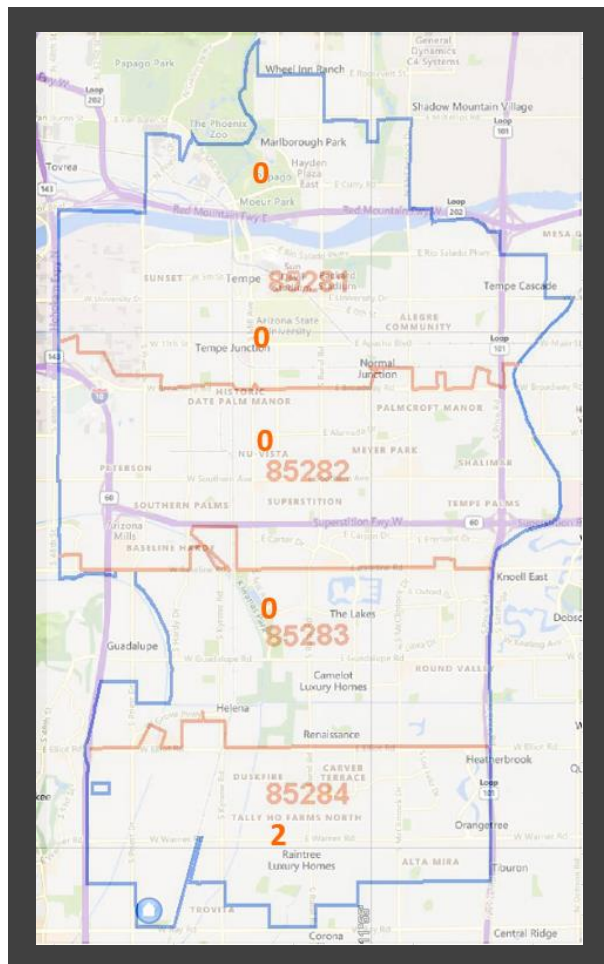


Figure 13: Complaint area codes

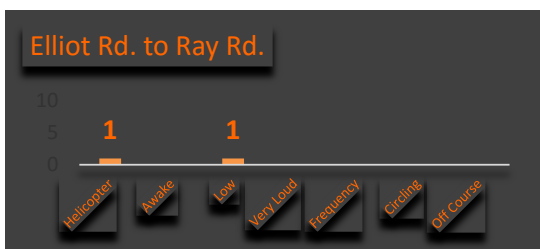
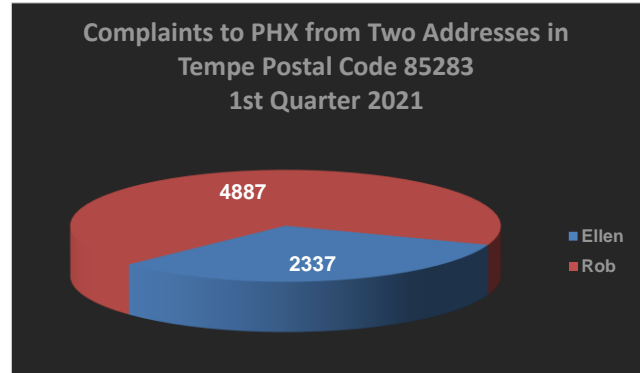
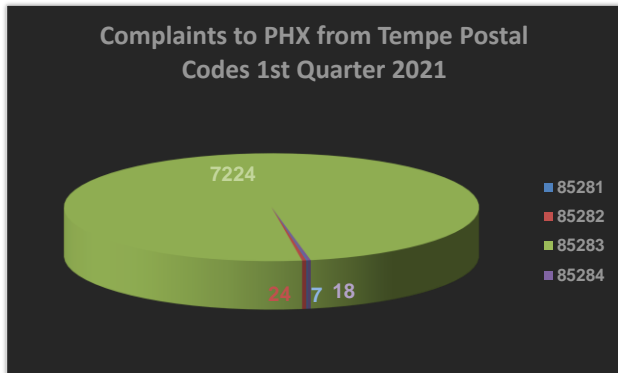


Figure 12: Location and type of complains received by Tempe.



Figures 14 and 15: Aircraft noise complaints received by the City of Phoenix from Tempe addresses during the quarter.

It has not been possible in this report to establish a clear correlation between the large volumes of complaints submitted to Phoenix from these home addresses and the total volume of airlines being routed over them.

Complaints can be submitted through the Tempe web site:



A city smart phone app is available for down-load with the option to report disturbing flights.



North Tempe Noise Exposure

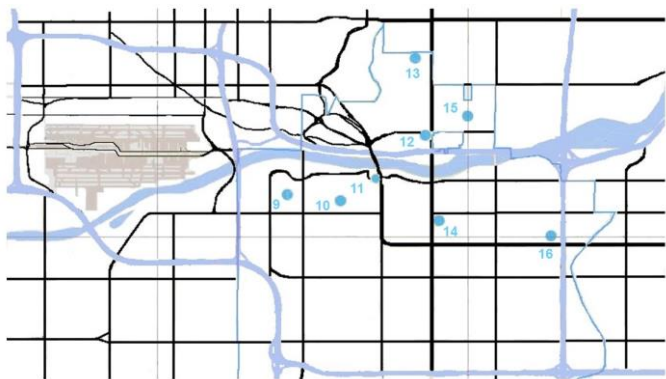


Figure 16: PHX ANOMS fixed noise monitors located in in Tempe.

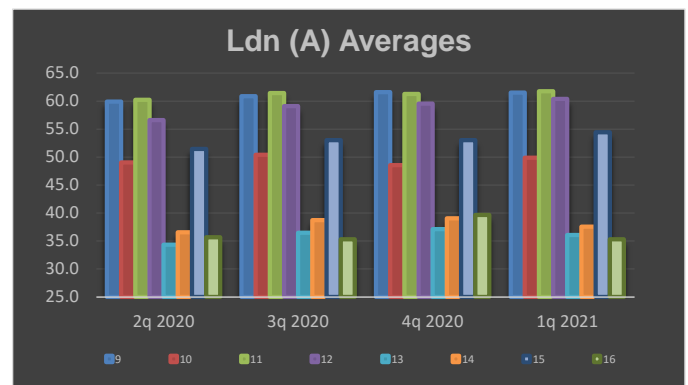


Figure 17: Quarterly Ldn (A) averages at Tempe monitoring sites.

Aircraft sound exposure are registered by twenty fixed PHX ANOMS noise monitors of which eight are located in North Tempe. Average equivalent sound level (Ldn) or Day Night Level (DNL) is the metrics used to determine exposure over time and is calculated over a 24-hour period with a penalty of 10 dB added for sound events occurring between 10.00 p.m. to 07.00 a.m.

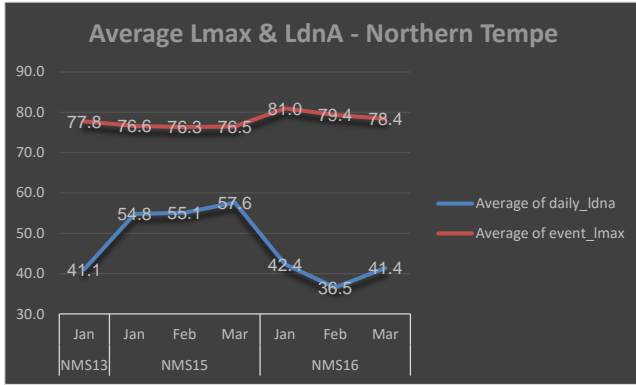


Figure 18: Average daily DNL and Lmax event levels in northern parts of Tempe.

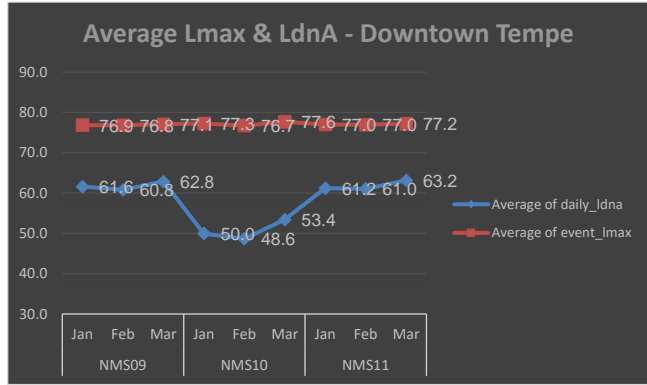


Figure 19: Average daily DNL and Lmax event levels in downtown areas of Tempe.

Lmax is the maximum A-weighted sound level, dB (A) squared registered during a sound event. “A-weighted” means the sound is measured at frequencies that reflect the sensitivity ranges of the human ear.

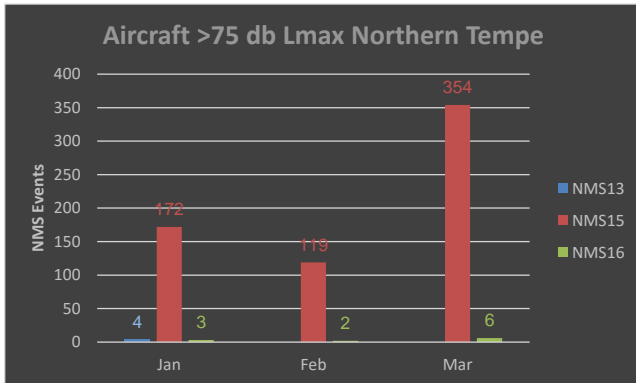


Figure 20: Quarterly count of Lmax events exceeding 75dB at sites in northern parts of Tempe.

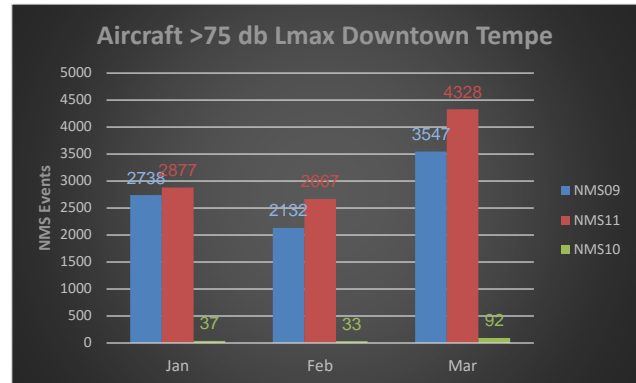


Figure 21: Quarterly count of Lmax events exceeding 75dB at sites in downtown areas of Tempe.

2020 PHX East Annual Summary

1. Introduction

This report is an annual summary of aircraft operations and noise mitigation flight procedures at Phoenix Sky Harbor International Airport (PHX) over the City of Tempe (Tempe). The City of Tempe is located directly east of PHX, but the airport is owned and operated by the City of Phoenix.

This summary is prepared for the Tempe Aviation Commission (TAVCO), a commission established pursuant to Chapter 2, Article V, Division V of Tempe City Code. TAVCO consists of nine Tempe residents appointed by the Tempe Mayor with approval of the Tempe City Council. The objective of TAVCO is to advise the Mayor and Council and assist City staff regarding the impact of aircraft and airport operations on Tempe residents and the monitoring, implementation of the 1994 Intergovernmental Agreement (IGA) between the Cities of Tempe and Phoenix regarding noise mitigation flight procedures which attempts to (1) contain departures to the area over the dry Salt River riverbed and Tempe Town Lake in North Tempe and (2) equalize the burden of departure traffic east and west of the airport.

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



April 13, 2020

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2. Eastbound departure compliance

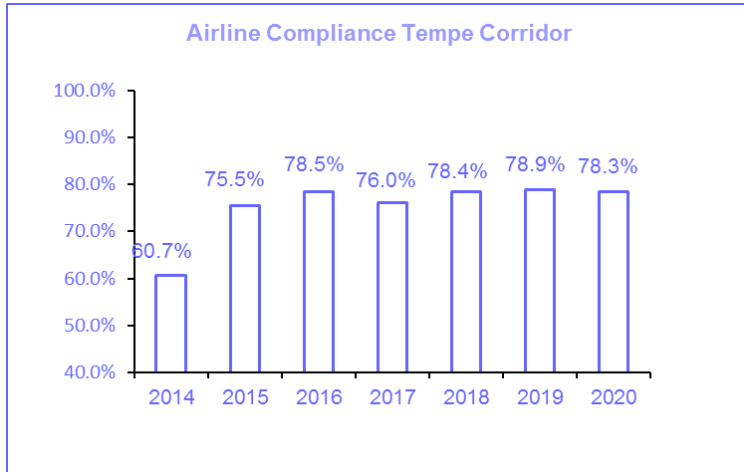


Figure 1: Compliance rates with adherence to the Tempe corridor.

The Tempe Aviation Commission uses a system of several imaginary gates that would create a “corridor” to determine which aircraft departures managed to stay within the confines of the riverbed east to a distance of 4-DME or to the SR202/101 intersection before dispersing. The airport favors using a single, vertical exit gate at the 4-DME, which departing jets need to pass through to stay in compliance.

Cross winds of ten knots or greater was used to filter out deviations due to weather.

The FAA implemented (NextGen) satellite based area navigation (RNAV) departure routing in September 2014 which helped improve airline compliance with the 4-DME Standard Instrument Departure (SID) procedure over North Tempe.

Large turboprop aircraft departures are routinely routed outside the 4-DME gate on diagonal headings to keep them out of the path used by the faster jet aircraft.

The average corridor compliance rate for the large airlines in 2020 was 78%.

3. East/West Equalization

The flow of jet and large turboprop aircraft departures east and west of the airport over the year attempts to reach the goal of a 50/50 split. In 2020 46% went east and 54% went west. Looking at day flows and night flows separately, the west side of the airport receives the most of these

departures during daytime hours, while most departures during nighttime go towards the east. This is demonstrated in Figure 2 below.

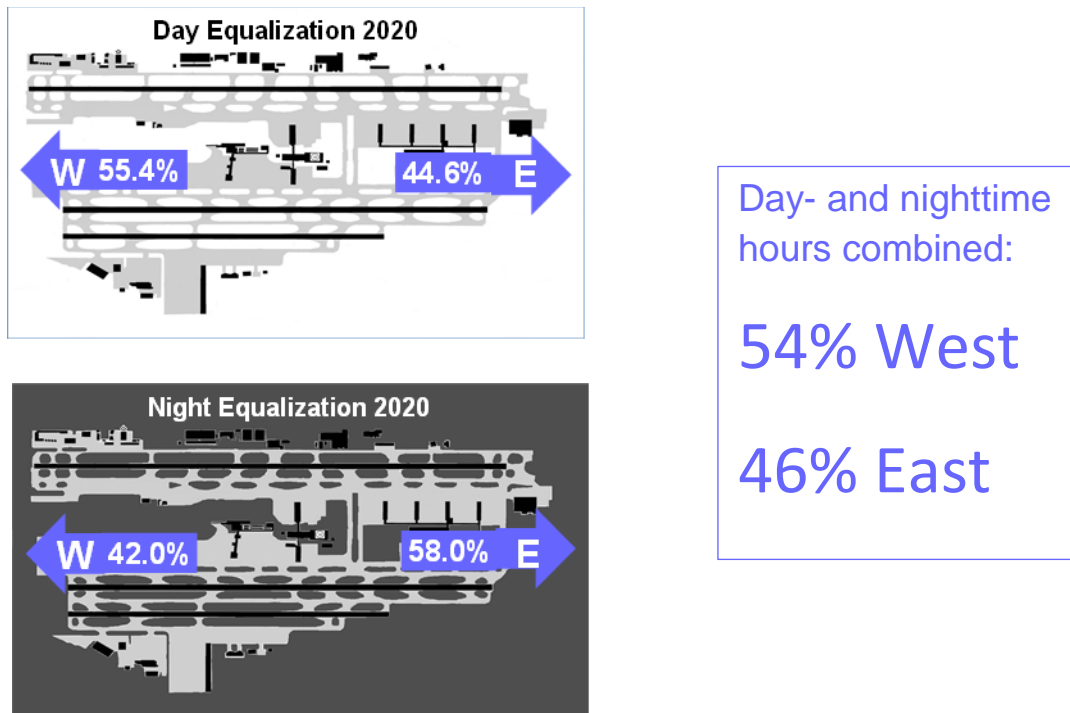


Figure 2: East versus west jet & large tuboprop departures separated to time of day

Daytime hours are defined as the hours between 7:00 a.m. and 10:00 p.m. local time, and nighttime hours the hours between 10:00 p.m. through 7:00 a.m. local time.

4. Noise Complaints

The City of Tempe registered and responded to 18 noise complaints from Tempe residents in 2020 (Figure 3).

PHX East	2015	2016	2017	2018	2019	2020
East Departures	95,931	95,102	86,857	88,967	85,391	73,523
West Arrivals	96,741	88,104	108,284	108,526	109,645	89,252
Complaints	172	74	60	43	26	18

Figure 3: Jet and large turboprop operations over the east side of PHX and the annual number of complaints received by the City of Tempe.

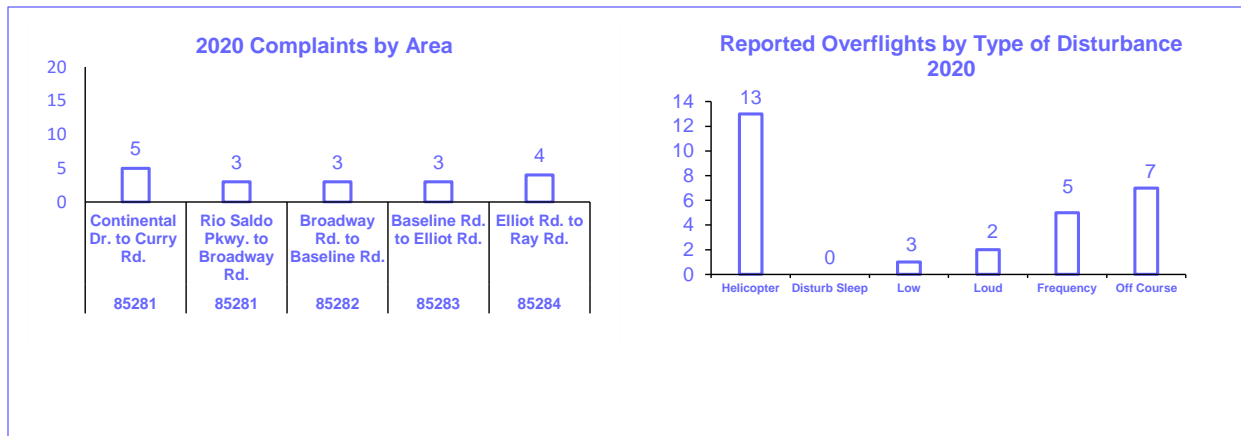


Figure 4: Complaints by area code

Figure 5: Type and number of Incursions.

Complaints to City of Tempe Call Center about aircraft movements observed from the ground to be close enough to constitute a nuisance that include several identified overflights, are registered as single complaints (Figure 4) with each of the identified overflights registered separately (Figure 5).

Tempe residents can also submit complaints directly to the City of Phoenix through phone, email or a PHX phone app (Figure 6).

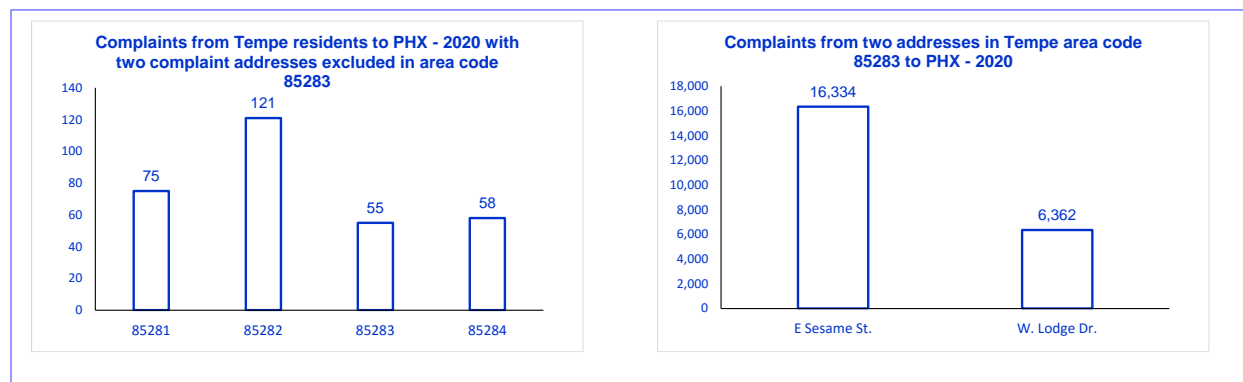


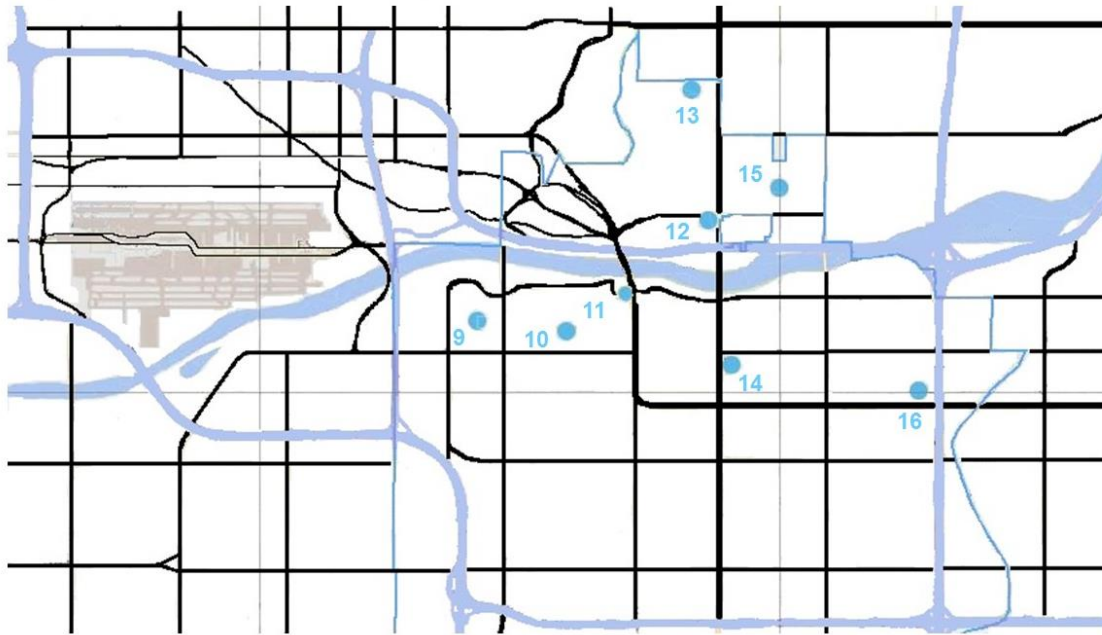
Figure 6: Complaints received by the City of Phoenix from Tempe residents in 2020 by area code.

The City of Phoenix receives a proportionally high number of their Tempe complaints from two address in area code 85283. One address close to the SR 101 and one close to the Western Canal under the KEENS departure route. It has not been possible in this report to establish a clear correlation between the large volumes of complaints submitted to Phoenix from these addresses and the total volume of airline departures and arrivals over these locations every quarter of 2020.

5. Average Noise Exposure

The City of Phoenix operates twenty noise monitoring sites (NMS) on both sides of PHX of which eight are located in the City of Tempe. The system is used to monitor and compute noise exposure

impact over time. The annual average sound levels are use noise planning where noise exposure contours determine compatible land uses, expressed in a sound metric called Ldn (A) or Day Night Level (DNL). The 2020 Ldn (A) levels for NMS in Tempe are shown in Figure 7.



Average (DNL)	NMS09	NMS10	NMS11	NMS12	NMS13	NMS14	NMS15	NMS16
2020	62.1	52.9	62.0	59.6	36.3	39.9	53.9	37.5
2019	64.2	54.5	64.3	62.1	NA	40.0	55.7	39.7
2018	63.7	54.4	64.4	61.5	37.1	40.6	55.1	40.4
2017	63.1	53.8	63.8	62.3	37.9	NA	55.5	41.1
2016	62.3	53.7	63.8	61.2	38.5	41.4	53.8	42.9
2015	62.3	55.5	63.5	60.2	38.1	42.9	55.0	42.0

Figure 7: PHX NMS in the City of Tempe & averaged sound levels.

NMS 13 in North Tempe was offline in 2019 because of equipment upgrades. In 2017, NMS 14 was offline due to a housing project on Eighth Street east of Rural Road.