



# Aircraft Noise Survey – Tempe, Arizona

(Survey period December 2012 – March 2013)



## Preamble

The City performs annual satisfaction surveys, which polls residents' attitudes to city services to help city planning efforts. The survey format did not fit the layout of a typical aircraft noise survey, and The Tempe Aviation Commission (TAVCO) decided to do a separate survey of attitudes to the impacts of noise from aircraft operations over Tempe using a form posted on the City of Tempe, "Tempe in Touch" website.

The Commission had two noise perception surveys conducted in 1999 and 2000. The same questions about the burden aircraft noise exposure were asked through telephone polling before and just after airlines started using a third parallel runway at Phoenix Sky Harbor International Airport. The 2000 survey showed that aircraft noise had become a concern for Tempe residents living in other areas than north Tempe and increased awareness of incoming and outgoing traffic flows.

## Summary

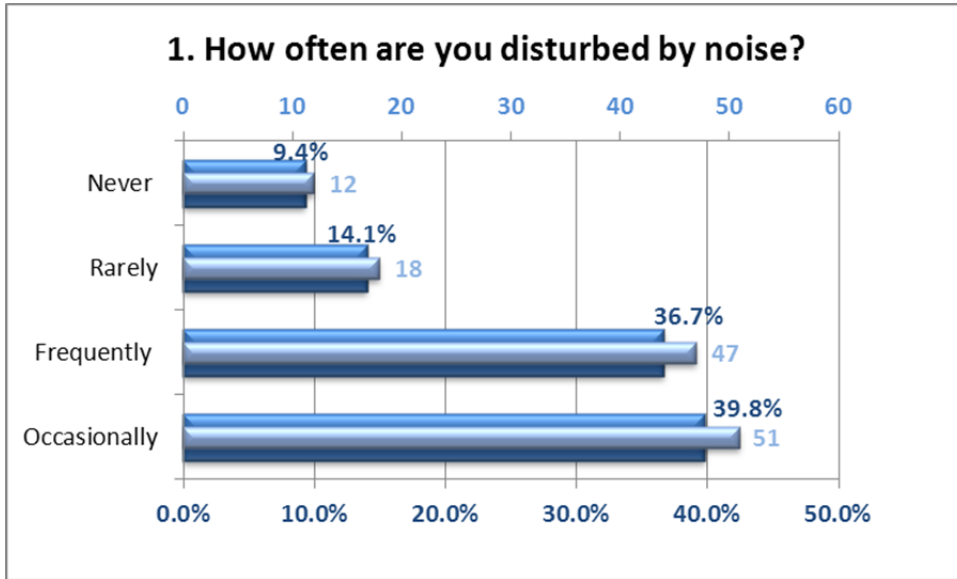
The survey responses on which this report is based, indicate that aircraft noise continue to impact the quality of life for Tempe residents. However, aircraft noise appears to have become more of an occasional nuisance with the reduction in operations that occurred after years with growth in operations with a third parallel runway in full use for commercial operation from 2001. The growing dominance of larger airlines and a receding economy in later years have reduced the total number of take offs and landings at the airport. Resident in north Tempe appears to be more bothered by westbound arrival operations than eastbound departure operations, and in south Tempe residents are troubled by an increase in the number of arrival operations. The responses also show that operations by helicopters and military jets are ranked as important contributors to the aircraft noise problem in Tempe.

## The Survey

The Tempe Aviation Commission decided not to adopt the type of questionnaires developed for the 1999 and 2000 surveys where the interviewer started out by asking several open ended questions about noise to avoid leading the interviewed resident to believe that the noise from aircraft was the only topic or sole focus of the surveys. The Commission discussed formulating questions that could give the Commission a supplement to the complaint data received by the City through the "Tempe 311" call center. The survey questions were posted on the City of Tempe website site on November 19<sup>th</sup>, 2012 with a link from the main website for the Tempe Aviation Commission. The survey is based on a random number of answers received from resident. 58.5 percent the respondents live in north Tempe close to the flight paths for the three parallel runways at Phoenix Sky Harbor International Airport. The survey questions are attached to the report on page 17. The survey was announced on the home page of the City of Tempe website site December 1, 2012, and by year end a total of 22 residents had answered the survey questions and submitted them to the City on-line. To increase visibility of the survey a link to the survey was posted on the city home page under "Hot Topics" from January 9, 2013

to February 15, 2013. Higher survey visibility on the City of Tempe website contributed to 108 additional residents completing the survey by the end of the survey period, March 23, 2013. The answers received on the survey questions are displayed in graphic format with paraphrased comments received from the survey respondents following each graph.

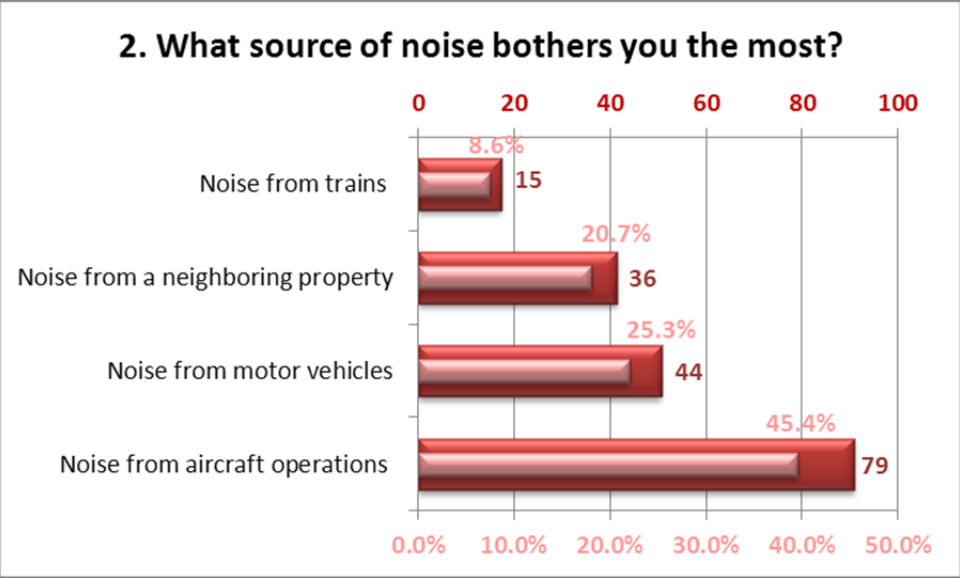
1. Noise in Tempe



Comments:
People who chose to live in a city next to a major airport should not complain. The survey should not exist.
When I moved to Tempe I was well aware where the airport was located. Having an airport within 10 minutes of home is a tremendous benefit, and for that benefit I am more than happy to live with a little noise.
Live five blocks away from Tempe St. Lukes hospital. Noise from the train, helicopters and planes does not bother me at all.
Not really bothered by aircraft noise. Occasionally I can hear an airplane scale back on airspeed as they are coming around to final and it sounds like they might fall out of the sky, but I know that isn't going to happen.
Not really. The airport was here before me.
For the most part, I am not bothered by airplane noise much at all.
Where I live in south Tempe, I am rarely bothered by aircraft noise of any kind.
I grew up around airports and airbases.
I been living here around two years and my family and I enjoyed looking the airplanes in the sky, is part of our weekly walk as a family. If you do not like the sound of airplanes this is not your place to live.

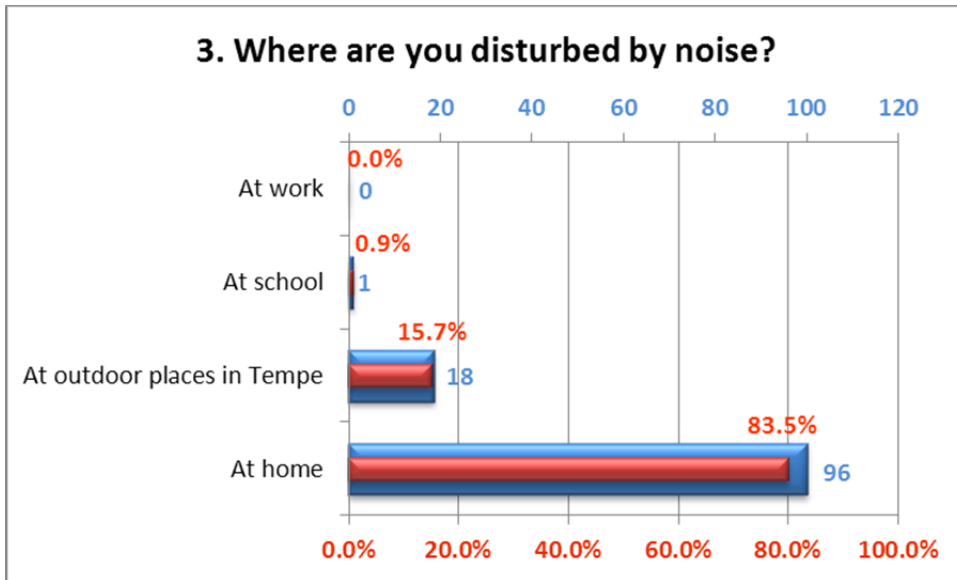
<b>Comments continued:</b>
At least it is not as bad as when I lived on east Mohave which is now the south runway and people in the planes would wave to me while I played in my backyard.
Greatly affects quality of life. I am looking to move out of Tempe due to plane noise.
Please do something about the aircraft noise.
It greatly affects quality of life. I am looking to move out of Tempe due to airplane noise.

2. Noise sources in Tempe



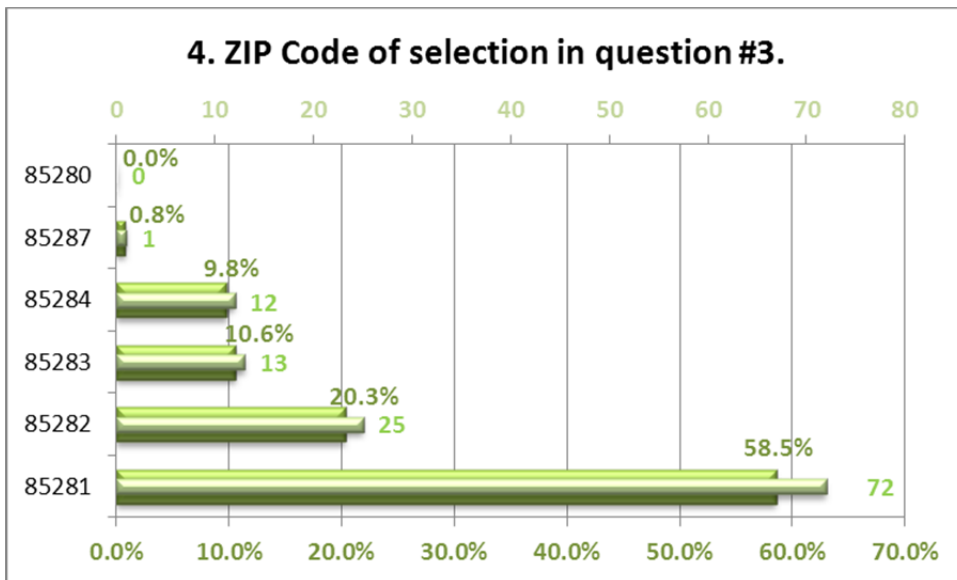
<b>Comments:</b>
The morning jets are so loud, I almost miss the train whistles, I could always tell the time by the whistles.
The noise from the train, helicopters and planes does not bother me at all.
In addition being a favorite path for helicopters, a few vehicles with very loud stereos & "thumpers" seem to cruise College Street at night too!
The music at the bars is getting louder and louder as time goes on. Over the last six months I have noticed the music becoming increasingly loud between 23:00-02:00, and I can hear this music inside my home with the windows and doors shut.
As far as neighbor noise, we have a neighbor that parties seems go on weekly during the week and they last up until 3 - 4 a.m. Outside loud talking and music drives me crazy.

3. Noise – Where in Tempe

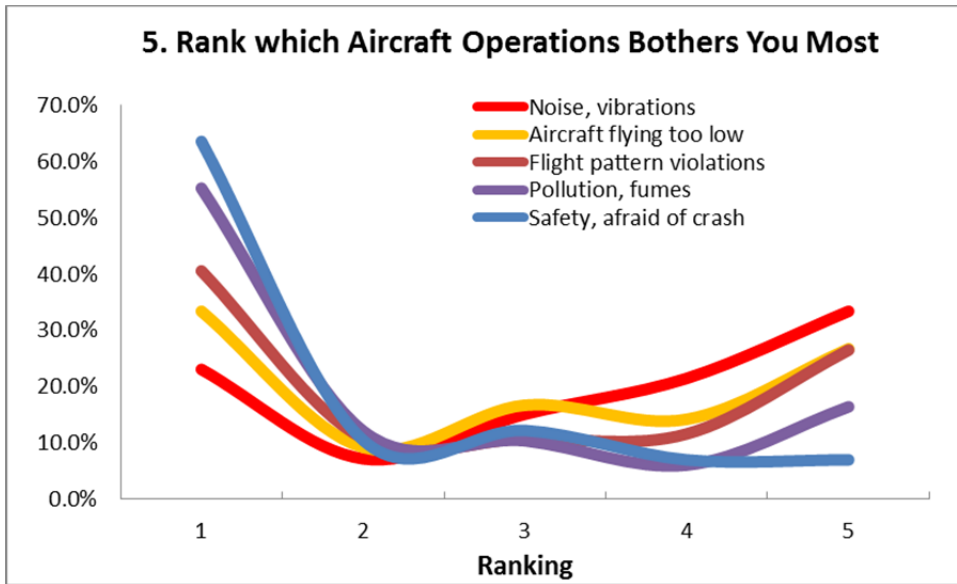


Comments:
The only place I am regularly bothered by airplanes is at Tempe Beach Park.
My main aircraft noise exposure is when I am on the ASU campus.
Planes overhead interrupt my playing on Rio Salado resort and country club.
Of course the plane noise above the downtown lake area is awful.

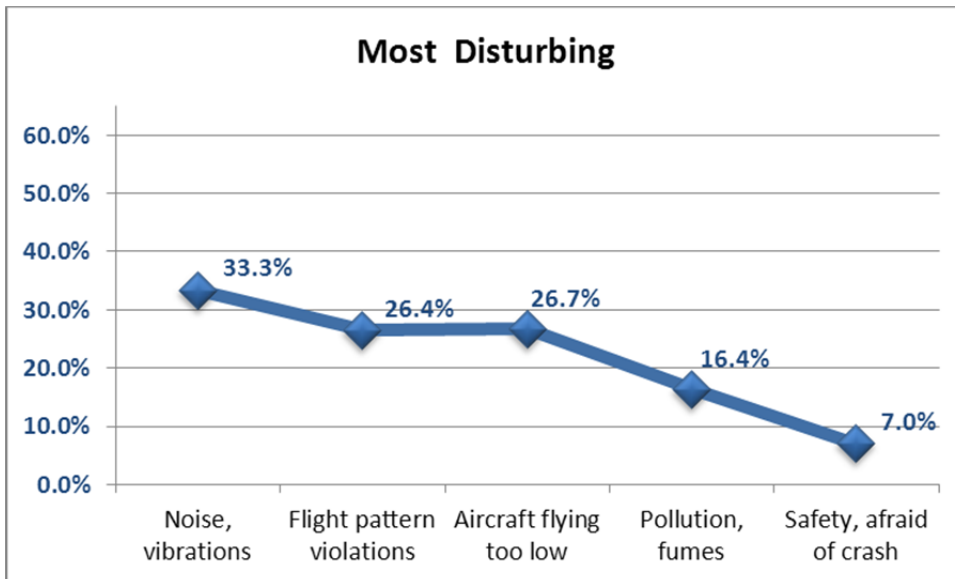
4. Noise – Where in Tempe by zip code

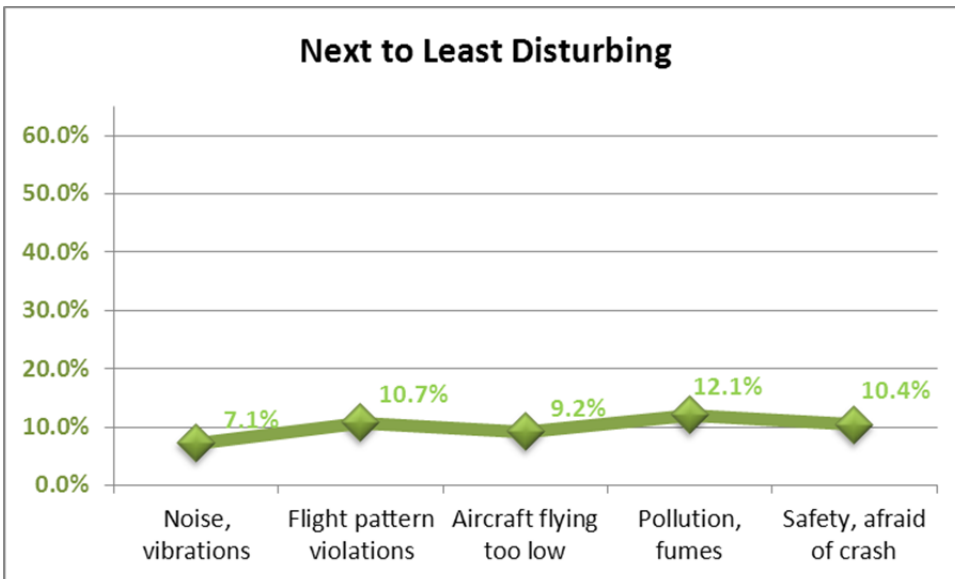
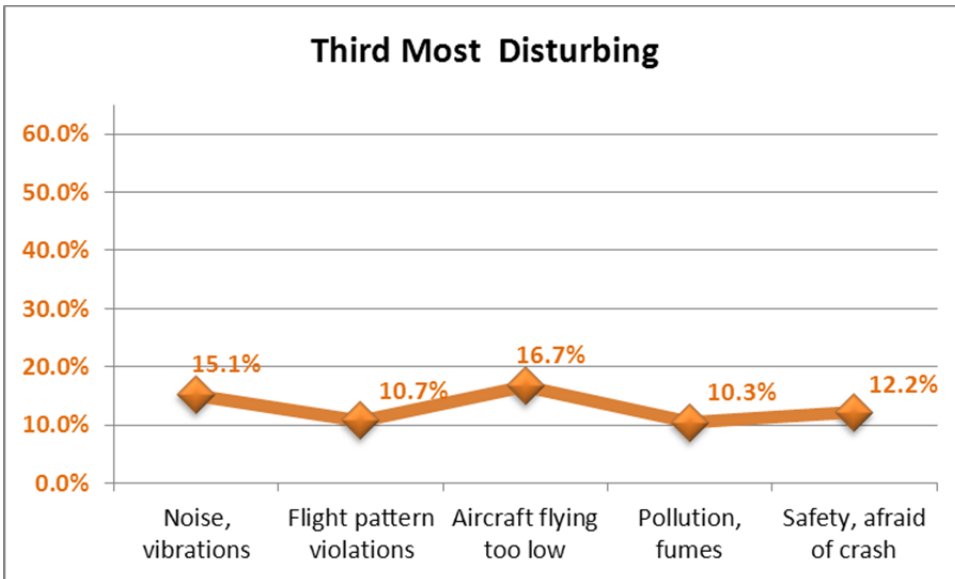
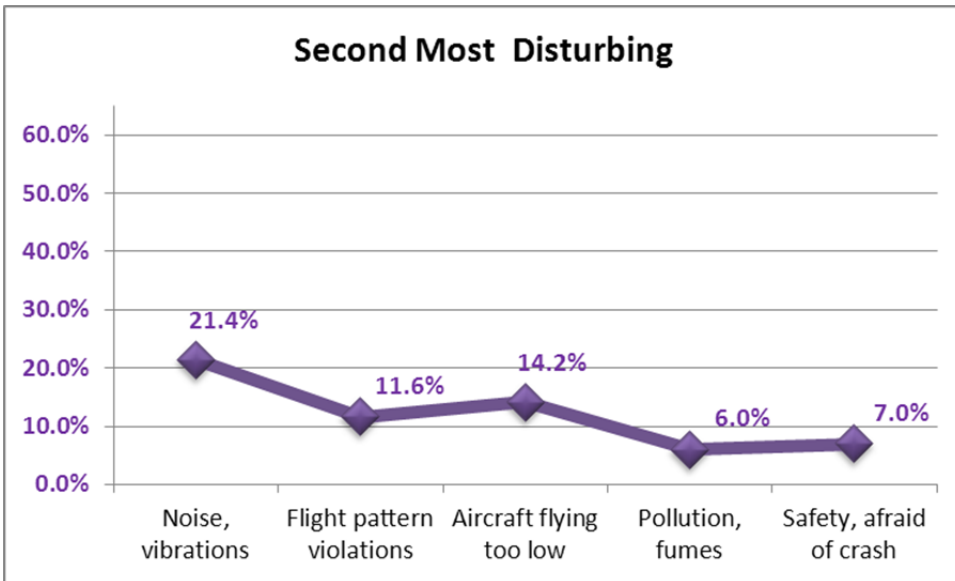


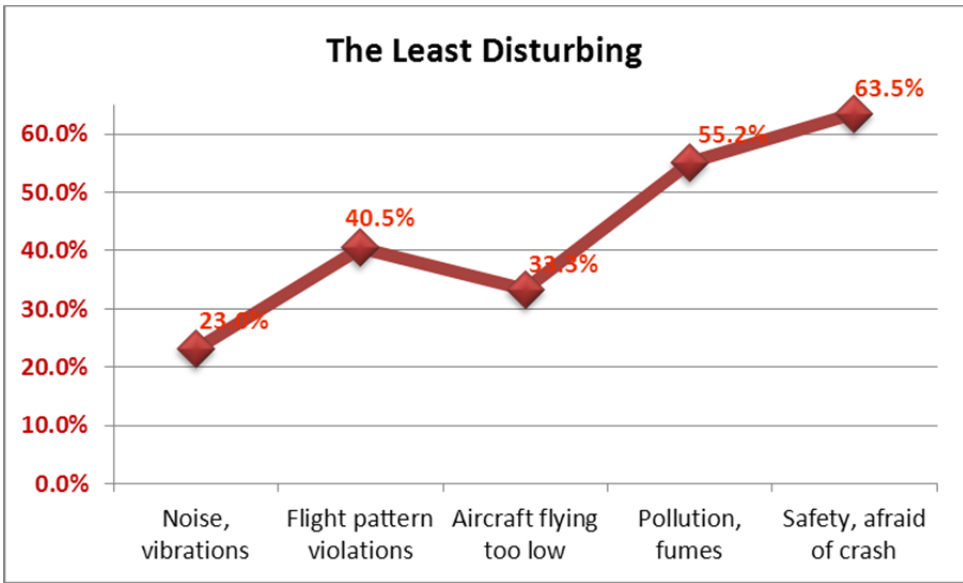
5. Noise - which aircraft operations bothers you the most?



1 = very little and 5 = a lot.





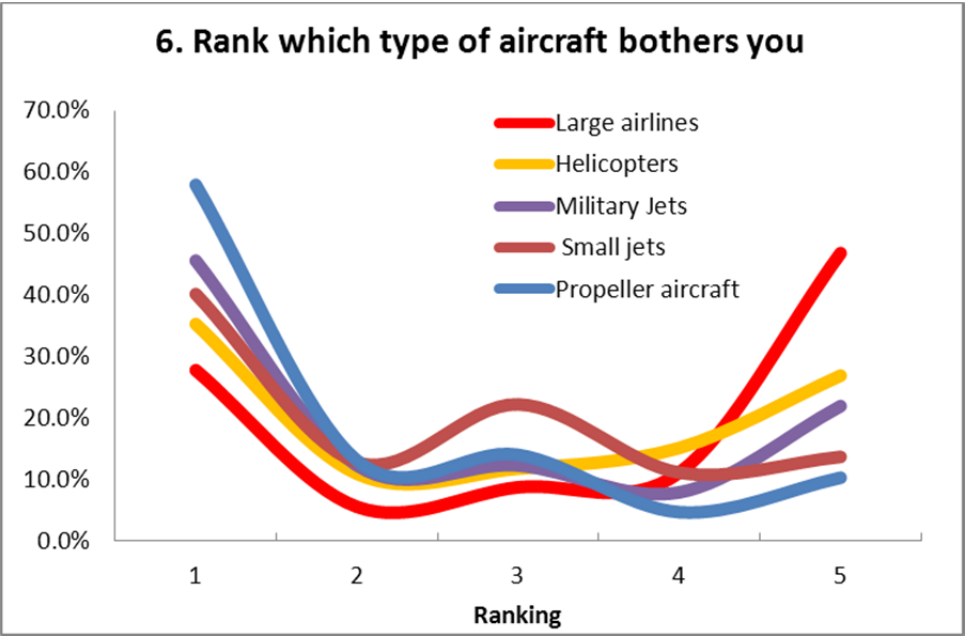


<b>Comments:</b>
I live "just outside" of the area considered to be effected by air traffic; many planes come over my house out of the pattern
Seems that the flight patterns are not where they are supposed to be going right over my house, but they often do.
Because my house is located off what is the designated flight pattern, most noise problems come from flights that cut out of that path. Then there are the flights that cut over my house to get into the official flight path. These planes are probably trying to make up time or short circuit a longer approach.
Just noticed an increase of planes flying over my property in the last few years. The number of planes flying directly or nearly directly overhead has been noticeably increasing each year.
Aircraft are supposed to use a line of approach that avoids the bulk of residential area using the river as a base point. It does not seem it is being upheld as much lately.
They turning right over my house along the 101 near Southern Ave.
The aircraft disrupt television viewing and makes the house shake.
The large aircraft that disturb us are usually those that are flying way off established normal flight patterns, like they are being directed over our house because of storms in the area (the clouds from which make it even worse by trapping the sound). Because they are accelerating the noise again causes momentary fear of a crash into the neighborhood.
The lack of enforcement that the City of Tempe does with the IGA.
We have recently experienced an increase in large aircraft noise and vibration in the area around Rover Elementary School at Lakeshore Drive and Watson Drive. Concerns include louder noise when de-escalating and the associated vibration.
It seems as though the planes are frequently overhead when they used to be closer to the river bottom/Tempe Town Lake.

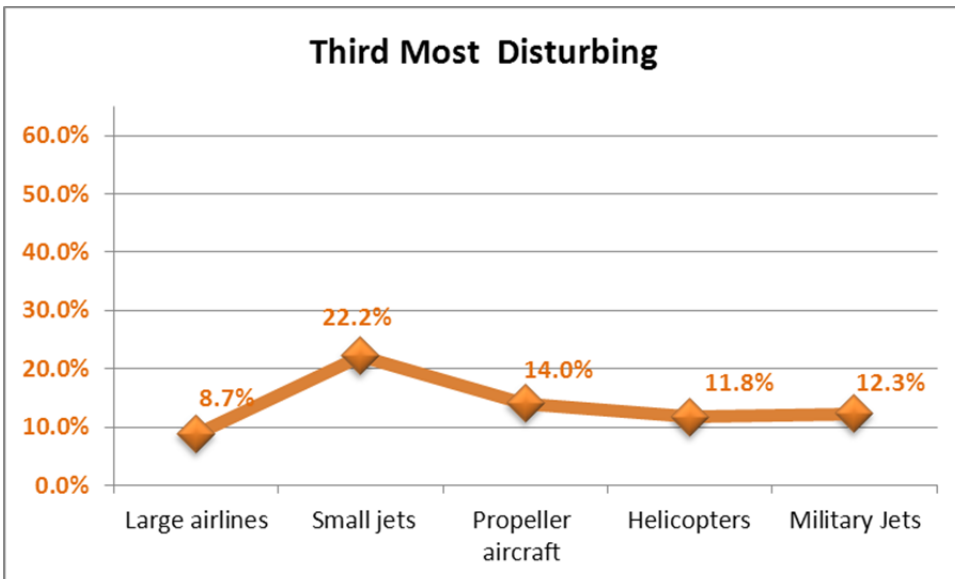
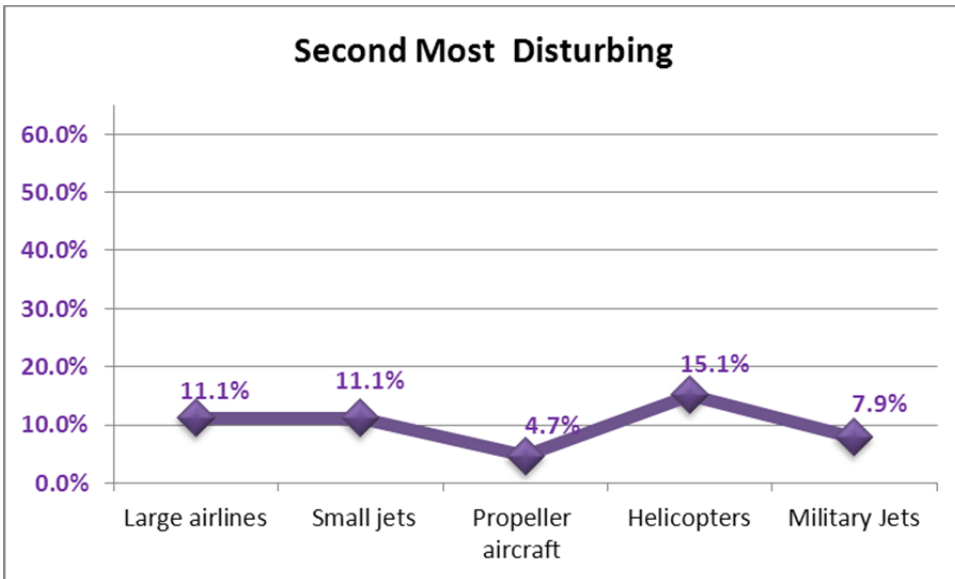
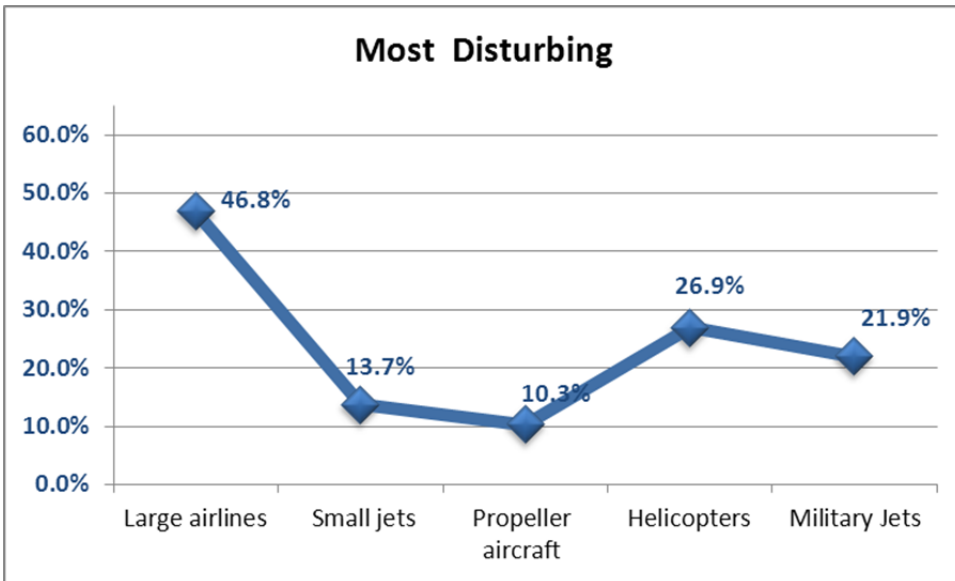


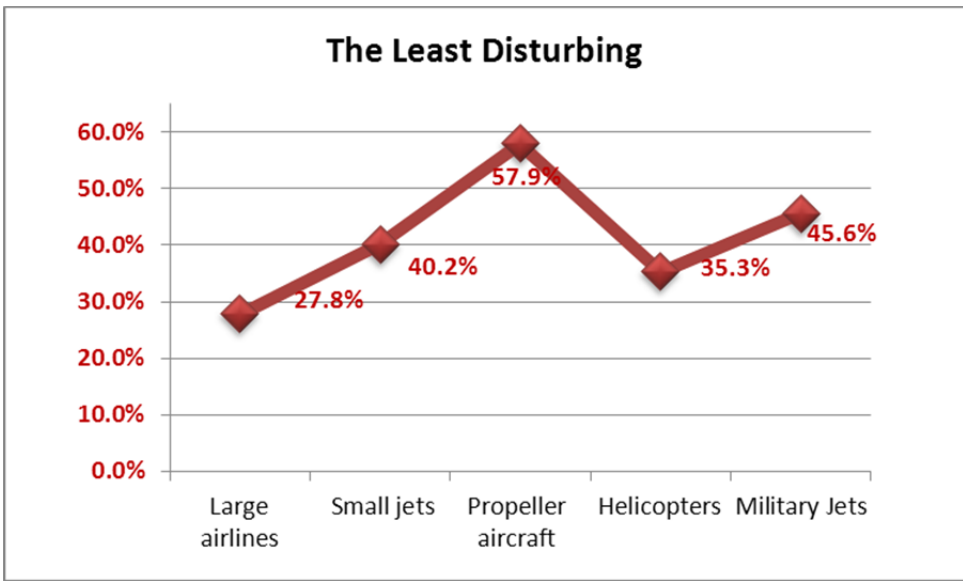
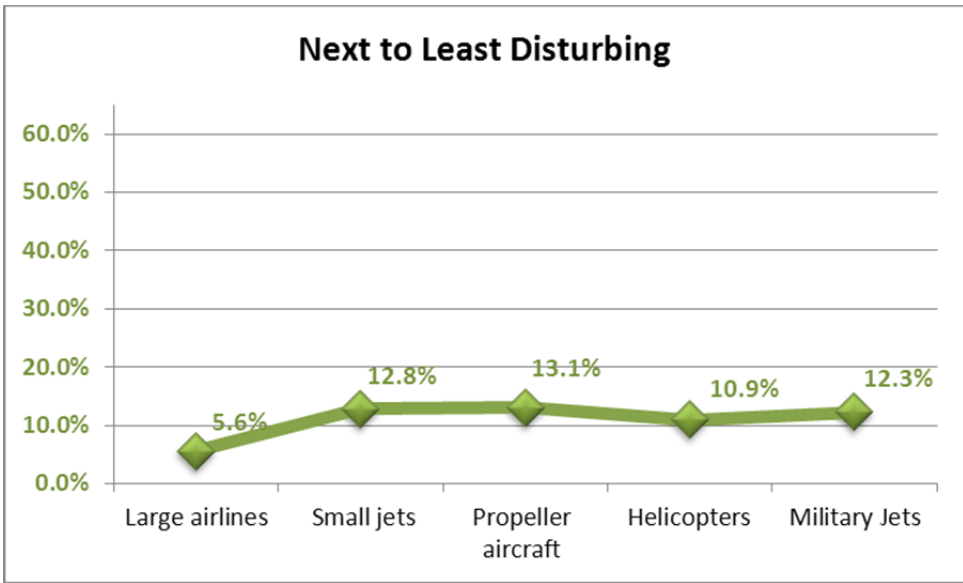
<b>Comments continued:</b>
Without fail whenever a large airline comes in low, out of agreed flight patterns or both it is a Southwest Airlines 737.
The planes should not be flying this low, making the noise they do, over south Tempe. We live south of Guadalupe, near McClintock, and the planes most likely from Sky Harbor are flying all the time. Right now, it is 10:30 p.m., and I still hear planes flying, making a lot of noise.
Seems like Sky Harbor is having the commercial flights go over south Tempe (Baseline area). Never seen so many planes before.
The planes are in a much wider flight pattern over our homes. I am concerned about safety and air quality since the large planes are flying over our homes much more often. Tempe has an Intergovernmental Agreement that the planes will stay within the Salt River Bed. This is not being followed. I am concerned with our Quality of Life regarding outdoor activities in north Tempe. I am concerned about the impact on our desert parks and environment. I am concerned for our Zoo and Botanical Gardens. Noise and exhaust emissions will impact these neighboring treasures. I am extremely concerned regarding any plans for a 4th Runway at Phoenix Sky Harbor.
The Pollution is very bad. I'm right under the flight path, there is like two right over my house. The house will just shake when some of them come in, and sure we're all afraid that one will crash right in to us. I just pray I sleep through it when it happens, scary thought.

6. Noise - which type of aircraft bothers you the most?



1 = very little and 5 = a lot.

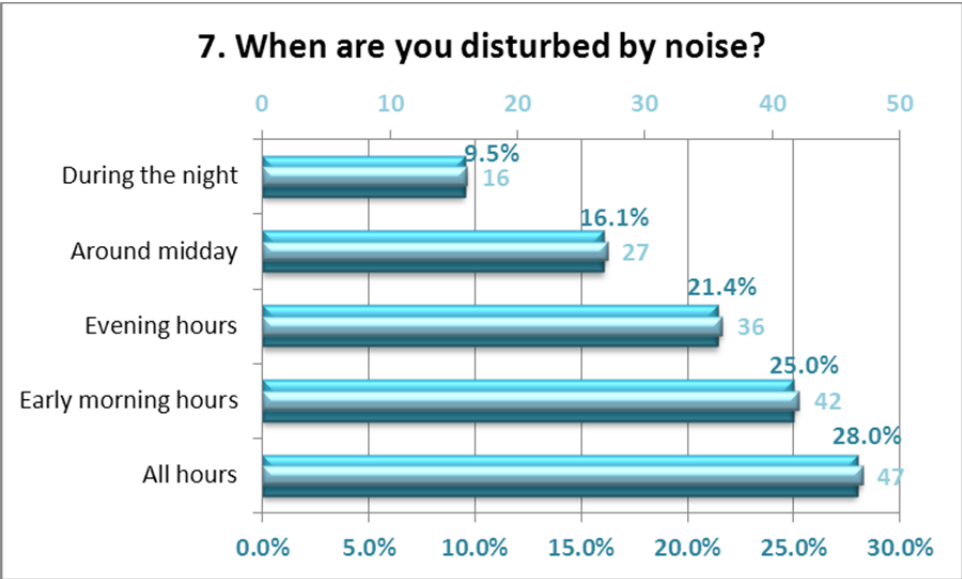




Comments:
It seems that the freight planes are the worst. They come down early in the morning and they are really low.
It's the big FedEx freighters that bother me. They fly really old MD-11's that are noisy.
There is one aircraft that is exceptionally loud and I have been told it is a military aircraft. The helicopters only bother me because they bring back the memory of a war zone I was in.
When the airline mechanics are conducting engine tests at the airport, the sound can be overwhelming to the point where my windows shake and rattle, and is especially disturbing when this happens at night

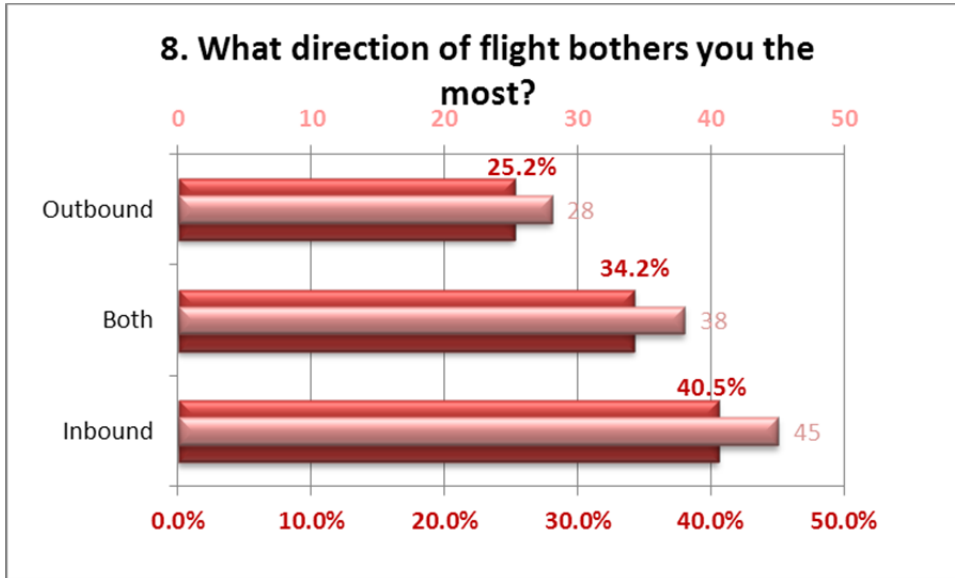
<b>Comments continued:</b>
Helicopters, I think from the Papago National Guard Base off McDowell. Military jets do not fly over very often, but there have been several times when they have flown at high speed, which is very loud
I live near the 101 and Baseline. Can we please restrict helicopters hovering over an accident scene the entire time of the accident? Can it just be one helicopter and only be allowed at the scene for 10 minutes?
The noise especially from military jets vibrates all the windows in my home.
Military Fighters National Guard has no regard to the citizens of Tempe or any other residents.

7. Noise - When you are bothered by aircraft over your home?



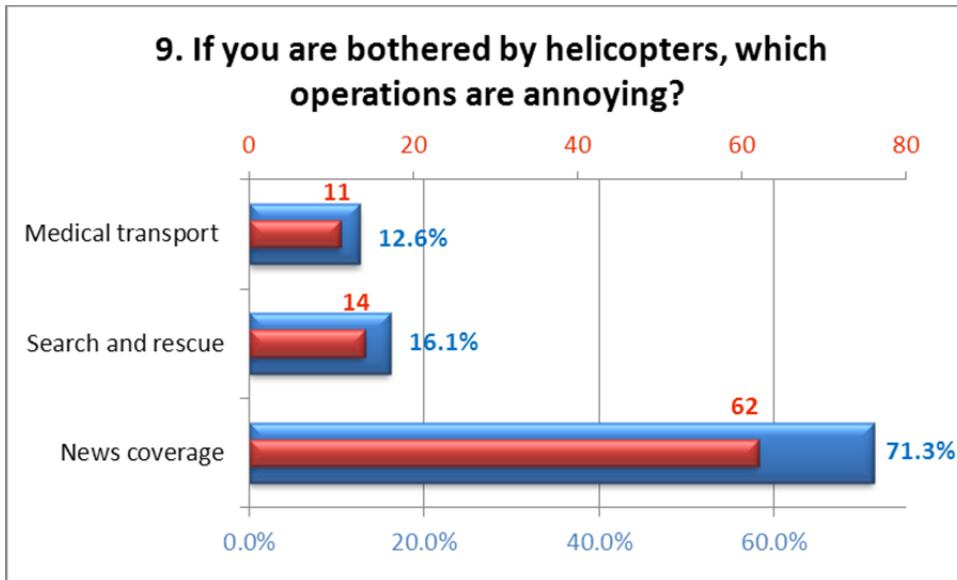
<b>Comments:</b>
In general I always used to like watching the planes take off or land; when my husband and I used to try to identify the type of plane. Now the morning jets are so loud. No phone calls or concentration during that time.
Around 6:00 a.m., actually 6:05 a.m. the first flights roaring out of Sky Harbor wake me up consistently without fail. Occasionally I have heard plane flights late at night, well past a reasonable time 10pm, sometimes even later than that.
Planes fly off what is the designated flight pattern, some very early and usually they are large heavy planes, and a few times they wake me up at 4:00-5:00 a.m.
They fly all hours without stoppage.

8. Noise – Phase of flight, outbound or inbound aircraft bother you the most?



<b>Comments:</b>
PHX seems to be using mostly the third runway and not the other runways as much?
Despite the assurances that were given when the third runway was built, aircraft on approach to the third runway are obviously being cleared for a "visual approach, straight in" and not for a "sidestep" as we were assured when Tempe agreed to the third runway's construction.
Usually it is different weather patterns in the afternoon which was not in the survey. They circle and go east, I think. Just notice when outside.
I've tried watching scientific programs when the massive morning outbound departures start. What a mistake! My volume has to be up very loud and even then massive parts are missed. Is there any initiative to replace windows to double pane south of University?
Take Offs: Large airline's planes and Air Force One are extremely noisy on takeoff, especially in an easterly direction. Landings: We notice moderate noise inside our house when the airliners landing pattern is south of Sky Harbor landing to the west. The planes make significant noise as they move to a lower altitude over Tempe before turning into the westerly landing pattern.
They have changed the flight plans for landing. Now they fly right over my house!
Feel like the landings of commercial aircraft are so loud, that the plane is coming right into my house

9. Noise – If you are bothered by helicopters, which operations are bothering you?

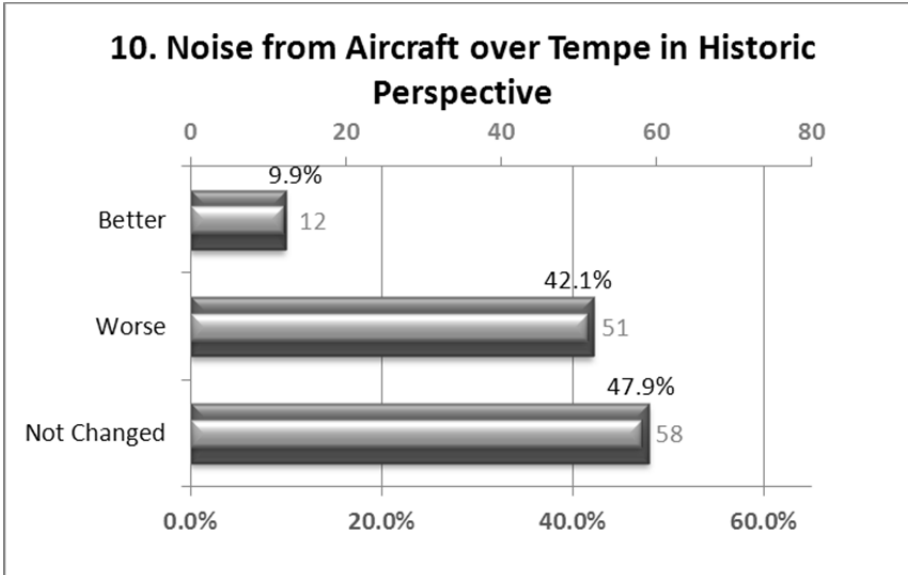


Comments:
News helicopters are incredibly obnoxious. I've had one hover over my apartment for twenty minutes before, and it was so loud I had to should to talk while inside
Just the news helicopters and the occasional Southwest Airlines that flies off course and low directly over my house.
College Street seems to be a favorite flight path for these helicopters.
I think the helicopter flight patterns changed recently.
I'm not sure "bother" is appropriate more like annoyed. Especially when you see/hear a helicopter over the neighborhood and no one can or will tell you what is going on.
Would like to see news helicopters being required to use quieter technologies. Same for corporate/business helicopters, which were not mentioned as a separate category above.
Police helicopters fly so low over my home that dishes rattle in the cupboard. If windows are open, I have to pause while speaking on the phone. Often loud enough that I must turn up the TV to hear dialogue. Seems to be routine patrols and they are repeated two or three times a day
The helicopters taking off from Tempe St. Lukes to head eastward sometimes barely elevate before flying over, and I've wondered if I should prepare to die because it is actually going to crash into my house!
Helicopters flying across my neighborhood do really bother me. It's just noticeable when they fly that low and overhead.

**Comments continued:**

Question #9 is not a properly presented. How are residents to know whether a helicopter is one of the three listed and why not were other categories of helicopters listed? This question is intended to limit choices and to influence responses because people will not want to criticize search and rescue or medical transport.

10. Noise – Getting better or worse?

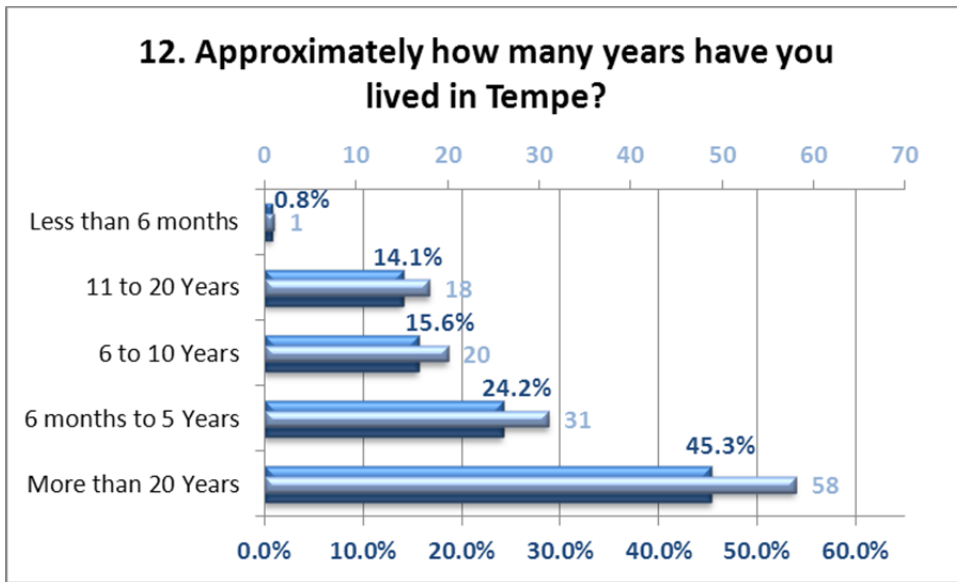


**Comments:**

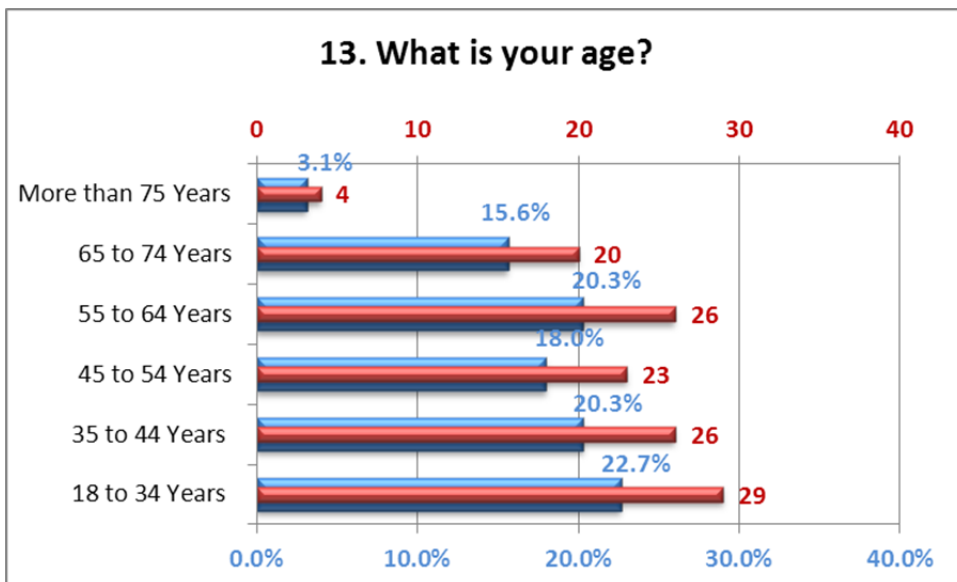
I have lived in my current home for almost two years now, and the noise is getting worse every day.

Question 10 is difficult to answer. In some respects, the noise from large jets has declined as airspace use has changed, noisier aircraft have been phased out, and RNAV has been implemented to some extent. However, deviations from IGA required departure flight paths have increased and are troublesome and invasive at my location.

11. How many years have you lived in Tempe?



12. Your age?





## Aircraft Noise Survey

The purpose of this questionnaire is to gather information on how noise affects your everyday life as a citizen of Tempe.

### 1. How often are you disturbed by noise?

- Never  Rarely  Occasionally  Frequently

### 2. What source of noise bothers you the most?

- Noise from a neighboring property  Noise from motor vehicles  Noise from trains  Noise from aircraft operations

### 3. Where are you experiencing aircraft noise to be most annoying?

- At home  At school   At work  At outdoor places in Tempe

### 4. ZIP Code of selection in question #3.

[Select an answer] ▼

### 5. Rank which aircraft operations bothers you on a scale where 1 = very little and 5 = a lot.

- |                           | 1.                       | 2.                       | 3.                       | 4.                       | 5.                       |
|---------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Noise, vibrations         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Flight pattern violations | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Aircraft flying too low   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Pollution, fumes          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Safety, afraid of crash   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

### 6. Rank which type of aircraft bother you on a scale where 1 = very little and 5 = a lot.

- |                    | 1.                       | 2.                       | 3.                       | 4.                       | 5.                       |
|--------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Large airlines     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Small jets         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Propeller aircraft | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Helicopters        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Military jets      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

### 7. When you are bothered by aircraft over your home, what time of day does it usually happen? Select all that apply.

- Early morning hours  Around midday  Evening hours  During the night  All hours

### 8. Does the noise from airplanes bother you more when planes are outbound on departure from Sky Harbor, or when the planes are inbound on approach to Sky Harbor?

- Outbound, when departing in easterly directions  Inbound, when de-escalating, or on approach to land  Both

### 9. If you are bothered by helicopters, which operations are annoying?

- News coverage  Medical transport  Search and rescue

### 10. Does it seem that noise from aircraft over Tempe has been:

- Getting better  Getting worse  Has not changed during the past few years

### 11. Is there anything else about aircraft operations over Tempe that bothers you?

### 12. Approximately how many years have you lived in Tempe?

- Less than 6 months  6 months to 5 Years  6 to 10 Years  11 to 20 Years  More than 20 Years

### 13. What is your age?

- 18 to 34 Years  35 to 44 Years  45 to 54 Years  55 to 64 Years  65 to 74 Years  More than 75 Years