



## Minutes Tempe Aviation Commission Noise Abatement Subcommittee September 6, 2016

Minutes of the Tempe Aviation Commission Noise Abatement Subcommittee meeting held on September 6, 2016, 6:00 p.m., at the Eisendrath House SRP Water Education Facility, 1400 N. College Ave, Tempe, Arizona.

**(MEMBERS) Present:**

Lane Carraway  
Robert Dixon (calling in)  
John Q. Nunes (calling in)  
Michael Sonenberg

**Citizens Present**

Olivia Davila  
Paul Hickey  
SuElen Rivera

**(MEMBERS) Absent:**

Shannon Dutton (Excused)

**City Staff Present:**

Oddvar Tveit, *Environmental Quality Specialist*

Meeting convened at 6:04 p.m.

**Agenda Item 1 – Consideration of Meeting Minutes (August 2, 2016)**

**Motion:** Lane Carraway moved to approve the meeting minutes as drafted. Mike Sonenberg seconded the motion.

**Action:** The August meeting minutes were approved by a unanimous vote.

**Agenda Item 2 – Fly Friendly Programs in place at U.S. Airports**

John Q. Nunes had collected airport flyers and other guidance to pilots about noise abatement measures in use at several airports nationwide. The material was made available to the members through electronic file sharing. He emphasized that as a private pilot, he routinely receives reminders about airport noise mitigation procedures in place at the airports, particularly when flying on the east coast. When flying in the area of PHX, pilots do not typically receive reminders about airport noise restrictions or guidance on how to fly with reduced noise exposure.

**Discussions:** Some airports seem to be more active in informing commercial and private pilots about noise mitigation, and reporting back to its surrounding community about the implementation, accounting for outreach efforts or noise abatement enforcement actions. John Q. Nunes pointed to the O'Hare Fly Quiet Program Fact Sheet and Manual that were part of the meeting documents as an example of what an airport can make available to its customers.

**Motion:** Mike Sonenberg moved for John Q. Nunes to work with staff to make a presentation for the next meeting about noise abatement procedures based on what is in place at other airports. Lane Carraway seconded the motion.

**Actions:** The motion carried by a unanimous vote.

**Agenda Item 3 – PHX Noise Abatement Fly Friendly Procedures**

- a. How to Evaluate Noise Abatement Flight Procedures:  
Oddvar Tveit presented a way to evaluate accountability of noise abatement in place at PHX under the

Tempe/Phoenix IGA from 1994.

- Among the three procedures included in the IGA, one procedure for the mitigation of noise from arrivals to the south runway is not accounted for since it has not been applied at PHX due to flight safety concerns.
- The other two procedures address noise from departures, and both are accounted for by the City of Phoenix and the City of Tempe in noise reports posted online. However, the parties account compliance differently for one of the procedures, and the enforcement of the procedure and notices about procedure violations given by the airport to operators of jet aircrafts has, for practical reasons, not been issued after each violation occurs as timely as agreed upon in the IGA.
- Only one of three procedures, the effort to annually equalize jet and large turboprop departures east and west of the airport both during day and nighttime hours, which PHX Air Traffic Control Tower is implementing, has raised few concerns over how it is measured and accounted for in noise reports. Air traffic data shows it helps to share the noise burden east and west of the airport on an annual basis.

b. Arrival Operations and NextGen

- The area navigation (RNAV) procedures route arrivals to the outer parallel runways at PHX. In 2013, a simulation study<sup>1</sup>, which included the routing of arrivals from the four corners of the airspace surrounding PHX, showed that NextGen benefits such as a fuel efficiency and less noisy descents (Optimized Profile Descents - OPDs) on the satellite based routes depend on how well en-route controllers maintain planes close to the RNAV fixes. With arrival traffic over Tempe, the routes on which planes could be kept close on track along the RNAV descent towards the airport were those coming in directly from the northeast and southeast. The arrival routes from the northwest and southwest were more dependent on intervention to set up optimal starting point of aircraft spacing on a chosen route (preconditioning) to secure optimal arrival flow along the route. Performance was improved the most when controllers managed to keep planes close to the en-route RNAV fixes on the northwest and southwest routes.
- The traffic on these northwest and southwest routes has to be merged from the en-route segment to a descent on a downwind leg, a path opposite the landing direction, and to a final approach to PHX. Depending on the traffic volume, this can result in planes being vectored off the downwind descent early on to a base leg over residential areas in north and south Tempe.
- Before 2001, with a two runway configuration in place at PHX, the "Power Plant" visual procedure intended to help avoid planes making short cuts from the southeast over residential neighborhoods around the ASU campus area. A similar procedure was in place for southwest arrivals on the west side of the airport called the "River" visual procedure. These historic noise abatement procedures for arrivals, which at the time were merged into a less efficient flow to the two runways at PHX, were not addressed in the 1994 IGA with Phoenix.
- Under NexGen, reaching the fuel efficiency and reduced emission goals of RNAV routing depend on what can be accomplished through technology and controller interaction to optimize the air traffic flow along the route. The simulation study shows that work done by air traffic controllers to optimize the conditions for effective flow early on in the en-route segment is important to get the technology benefits of RNAV arrival procedures, and particularly on routes that end with a downwind segment. If not, it can lead to disorganized terminal-area traffic flow. For Tempe, this has relevance to the two routes mentioned in the 2013 simulation study, the northwest and southwest arrivals.

**Follow-up:**

Staff will invite City of Phoenix staff to share how they reach out to their customers about PHX noise abatement measures at the November 2016 subcommittee meeting.

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<sup>1</sup> Simulations of Continuous Descent Operations with Arrival-Management Automation and mixed Flight –Deck Interval Management Equipage, Tenth USA/Europe Air traffic Management Research and Development Seminar (ATM2013).

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**Agenda Item 4 – Input to Tempe Public Meeting**

The group will be represented on the noise abatement and noise monitoring table to inform and answer questions from the public about the subcommittee's work at the October 5, 2016 public aviation meeting in Tempe.

**Agenda Item 5 – Schedule Next Meeting**

The next subcommittee meeting was scheduled for October 4, 2016 at 6:00 p.m. at the Eisendrath House SRP Water Education Facility.

**Agenda Item 6 – Adjournment**

**Motion:** Mike Sonenberg moved to adjourn the meeting. John Q. Nunes seconded the motion.

**Action:** The meeting was adjourned by unanimous vote at 7:06 p.m.

Prepared by: Oddvar Tveit and Cassandra Mac

Reviewed by: David McNeil

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Authorized Signature  
Environmental Services Manager