APPENDIX A
PUBLIC NOTICE AND SCOPING MATERIAL

RISSOIDZ

ARIZONA DAILY STAR

Tucson, Arizona

STATE OF ARIZONA) COUNTY OF PIMA)

Debbie Capanear, being first duly sworn deposes and says: that she is the Legal Advertising Representative of TNI PARTNERS, a General Partnership organized and existing under the laws of the State of Arizona, and that it prints and publishes the Arizona Daily Star, a daily newspaper printed and published in the City of Tucson, Pima County, State of Arizona, and having a general circulation in said City, County, State and elsewhere, and that the attached and was printed and

Legal Notice

published correctly in the entire issue of the said Arizona Daily Star on each of the following dates, towit:

SEPTEMBER 12, 2011

Subscribed and, sworn to before me this day of

Notary Public

My commission expires

AD NO.

7586621

Notary Public State of Arizona Pime County Lise Diane Rounguez IN EXDITAL My Comment 09/27/2013

Public Notice ofa

Public Scoping Meeting Proposed Implementa tion of National Guard **Bureau's Training Plan** 60-1 in Support of **Operation Snowbird** Davis-Monthan Air Force Base, Arizona

The U.S. Air Force announces the plans to conduct two public scoping meetings to facilitate the

plans to conduct two public scoping meetings to facilitate the preparation of an Environmental Assessment (EA) that evaluates the proposed implementation of Na-tional Guard Bureau's (NGB) Train-ing Flan 60-1 at Devis-Monthan (DMAFB), Arizona. The TP 60-1 is proposed for implementation in support of Operation Snowbird (OSB), which is a program that is managed by Air National Guard's (ANG) 162nd Fighter Wing (162 FW), Detachment 1. NGB is in the process of updating the TP 60-1, which has triggered the need for analysis, in compliance with the National Environmental Policy Act (NEPA) of 1969. As part of the National Environmental Policy Act (NEPA) of 1969. As part of the National Environmental Policy Act (NEPA) of 1969. As part of the neetings to solicit input from the public regarding the proposed ac-tion and alternatives. Other alter-natives currently being considered include the No Action Alternative which entails the continuation of OSB at 2002 levels; addition of oth-et U.S. and the addition of U.S. and foreign alread at 2002 level of op erations; and the addition of U.S. and foreign alread at 2002 level of op erations. Two open house scoping meetings

Two open house scoping meetings will be held on 27 September and 28 September from 5:30 pm until 8:00 pm. The first meeting will be conducted at the Sheraton Four Points, 1900 Fast Speedway, Tuc-son, Arizona 85719, and the second meeting will be held at the Empire High School, 10:1701 East Mary Am Cieveland Way, Tucson, Arizons 95747. No formal presentations will be provided: however, subject mat-ter experts will be on-site to an-swer questions. Questions regard-ing the meeting or the EA can be submitted via e-mail at 355wopaavidmatimil, subject mat-ter of the meeting or the EA can be submitted via e-mail at 355wopaavidmatimil, subject mat-ter of the meeting or the EA can be submitted via e-mail at 355wopaavidmatimil, subject line "Ose EA COMMENT SUBMITTAL" Comments or input regarding the alternatives or potential impacts on sensitive resources can be submit-ted at either of the meetings or lot er via U.S. Postal Service at the fol-lowing address: DMAFB Public Af-fairs Office to the following ad-dross: ATTN: OSB EA COMMENT SUBMITTAL, 355th Fighter Wing Publich Afairs, 3130 S. First Street, Davis-Monthan AFB, Arizona 85707. Information must be provided by 28 October 2011. Once the EA is pre-pared, it will be released for public review and comment for a period of 30 days.

Publish September 12, 2011 Arizona Dally Star



PUBLIC SCOPING MEETING HANDOUT ENVIRONMENTAL ASSESSMENT Proposed Implementation of the National Guard Bureau's Updated Training Plan 60-1, Davis-Monthan Air Force Base, Arizona



The National Guard Bureau (NGB), National Guard (ANG) has Air recently updated their Training Plan (TP) 60-1. This updated plan addresses the NGB's management of Operation Snowbird (OSB) at Davis-Monthan Air Force Base (DMAFB), Arizona. OSB is a program that is managed by ANG's 162nd Fighter Wing (162 FW), Detachment 1 (Det 1). Separate from OSB, routine ANG activities are conducted by the 162 FW out of the Tucson International Airport (TIA).

OSB has been in existence since 1975 and was originally designed and implemented to allow ANG units from bases located in northern latitudes (or "northern tier") to train in optimal weather conditions and vast airspace over southern Arizona. primarily during the winter months. The OSB program is headquartered out of DMAFB, which is one of the U.S. Air Force's Air Combat Command (ACC) bases. The 162 FW Det 1 OSB is considered a tenant at DMAFB, and the OSB discussed activities in this Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) of 1969 are being addressed by Headquarters (HQ), ACC.

The 355th Fighter Wing (355 FW) completed an EA and a Finding of No Significant Impact (FONSI) was

issued in 1978 to address the new activities occurring under OSB at DMAFB. Another NEPA document prepared since that time that included analysis of OSB activities was the 2002 Final Environmental Assessment for the West Coast Combat Search and Rescue (CSAR) Beddown. Thus, that 2002 EA will be used as the baseline for the EA to be prepared to assess the potential impacts on the human and natural environment of the proposed implementation of the NGB TP 60-1 at DMAFB.

DMAFB provides all of the facilities and assets essential to the success of NGB's training mission. These include but are not limited to:

Facilities and Administration

- 13,643-foot runway
- Live Ordnance Loading Area Live munitions storage and build-up facilities
- Bulk Fuel Storage/Loading
 Area
- On-base medical, lodging, and dining facilities
- On-base master mechanics/maintenance for the A-10 and F-16 aircraft

Infrastructure Assets

- Secure communications
- Data link infrastructure
- Dedicated aerospace ground equipment (AGE)
- Access to existing engine analysis laboratory
- Existing, dedicated ramp space

Safety and Operational Assets

- Crash/Fire/Rescue response
 unit
- Immediate access to hydrazine storage and emergency response for F-16 aircraft
- Existing Anti-terrorism and Force Protection systems
- Close proximity to available military airspace and enhanced electronic tactical ranges

The NGB and ACC, through the U.S. Army Corps of Engineers (USACE), Sacramento District intends to Environmental prepare an Assessment (EA) to address the potential effects of the implementation of the NGB TP 60-1 at DMAFB. The EA will assess the environmental and socioeconomic impacts, adverse and beneficial, of reasonable alternatives all that satisfy the NGB's purpose and need for the training mission. The No Action Alternative, as required by NEPA, will also be considered in the EA. The No Action Alternative would maintain the level and types of aircraft that were analyzed in the 2002 EA. The EA will provide information on all reasonable alternatives with regards to existing

conditions and present use, and potential cumulative effects to socioeconomic and environmental concerns.

The public scoping meeting is being conducted to provide a forum that allows the public to make comments and provide input relevant to the proposed action, alternatives and proposed areas of analysis. In addition, the meeting provides a forum for the Air Force to discuss the NEPA process and the alternatives currently being considered.

The public is invited to attend the informal meeting and ask questions or provide comments regarding the proposed alternatives. It is requested that all comments be provided comments either be provided on the attached comment sheet, or sent via e-mail to DMAFB at 355wgpa@dm.af.mil. All comments will be considered during the preparation of the EA. Please refer questions to officials attending the public meeting. Written comments following the public meeting will be accepted through 26 October 2011 and can be sent to the DMAFB Public Affairs Office at the following address:

ATTN: OSB EA COMMENT SUBMITTAL, 355th Fighter Wing Public Affairs, 3180 S. First Street, Davis-Monthan AFB, AZ 85707



PUBLIC COMMENTS ON 2012 DRAFT EA

From: MARYLOU AND NORM FEIGER [mailto:feigerloulou@msn.com] Sent: Wednesday, August 15, 2012 3:22 PM To: 355 FW/PA 355th FW Public Affairs Subject: OSB EA Comment Submittal

In Reference to more flyer planes, besides the F15,F16, F etc and etc. I have lived in my house for 30 years, and now I am in my last years of life. I believe I should have a peaceeful life. Jets flying at night, would kill me quickly, as ample sleep is what keeps us alive. I love my home and surroundings, and this would errupt my world. Majority of the homeowners in my area, all believe the same as me. Only they are not knowledgeable to computers. They still ask me what happened the the 4 propellor planes. The EA Misleads the Public. How can the Air Force say that there IS NO SIGNIFICANT IMPACT FOUND. I had a good laugh at this, as with anything that disrupts the quality of living for any age person, THAT IS A SIGNIGICANT IMPACT. I would love to read a report, with the backed up data, in Non-Technical terms, so that I can share this with my wonderful neighborhood. Many changes are made without the corrections being made to the public. Is this all a SECRET?

WHAT DOES RUNWAY 12 AND RUNWAY 30 MEAN? I believe this jargon shows the disinterest the air force has in the people who have lived theri lives out in the vacinity of DM.

I do not support the OSB EXPANSION PROPOSAL. I don't need to read about a 2007 noise study that was made, indicating NO SIGNIFICANT IMPACT. When I cannot hear my husband talking right next to me, while the F16's are overhear, how is this bettering the quality of my life. You can laugh at this, but I have perfect hearing, it's the Air Force that tries to lead us to believe that the sounds have no impact.

What about the noise levels for all those infants, that will grow up needing hearing airs before they get into first grade. That's where the joke is, what do you think we are, a bunch of dummies? Think this over carefuly. As Tucson Forward will not give up, until the people are satisfied.

Lawrence Quilici

7501 E Rio Verde Drive

Tucson, AZ 85715

8/17/12

Greetings:

We need a real Environmental Impact Statement and several public hearings before Operation Snowbirds flights over Tucson 24 hours a day begins.

I lived in Carson City, NV in the 70's when the Air Force wanted to put the MX Missile System in Central NV. They had several public hearings and decided to dump it in WY where it became obsolete.

I lived in Fallon, NV in the 80's where there is a Naval Air Station and all Carrier Air Wings practice for 2 weeks to bomb, maim, strafe, and kill and the night sounds were horrific until the public protested.

An authentic EIS and public hearings are absolutely necessary for a win/win strategy, good public relations, peace and serenity for all as well as a published email address for more responses.

Wisdom at 70, Fulli **[Rev.]** Lawrence Ouilic

Retired Prison, Hospital & Hospice Chaplain

From: Kathleen Williamson, Esq. [mailto:kgw@williamsonandyoung.com] Sent: Friday, August 17, 2012 9:24 PM To: 355 FW/PA 355th FW Public Affairs Subject: OSB EA Comment Submittal

ATTN: OSB EA COMMENT SUBMITTAL 355th Fighter Wing Public Affairs 3180 S. First Street Davis-Monthan AFB, AZ 85707

mailto:355WGPA@dm.af.mil

757-764-5994 (Air Combat Command Public Affairs) or 228-3398 (D-M Public Affairs)

(Sent via email rather than telephonically or snail mail)

Dear OSB EA Comment Panel:

I thoroughly agree with the Tucson Forward position regarding the flaws and biases of the EA recently conducted regarding Operation Snowbird in Tucson. I lived under that flight path for 20 years (4th and Lee area). It has had a bad impact on Tucson all these years but has gotten worse since the early 2000s. Now it threatens to double and include night flights while presenting a skewed EA claiming that these increases would not have a negative impact on Tucson. It already does and the negative impact would double at a minimum. Also, night flights is an obnoxious idea. We have rights to quiet enjoyment of our homes and rights to safety from jet accidents and air pollution caused by over head flights. The US military is the largest consumer of fossil fuels in the world, at taxpayer's expense and is dumping its toxic waste on American citizens. To make matters worse, it allows foreign pilots to train over the homes of American citizens in urban areas like Tucson. Tucs!

on has invested tremendous amounts of money in urban planning and historic preservation, all of which suffers under the noise and danger of overhead flights. If our town council and county government cared about citizens at all, they would object to the degredation of our beautiful area and lives due to overhead flights.

Do not double the damage you already do to Tucson.

Regarding the faulty EA, here are just a few comments:

Environmental Justice

Cover Letter, lines 47-49 "There would be no additional disproportionately high and adverse impacts on minority and low-income populations near DMAFB compared to those impacts associated with No Action Alternative." The Table 2-4 on page 2-13 does identify a minority low-income area that

is disproportionately impacted under the OSB "No Action Alternative" and yet it concludes that doubling the number of OSB sorties and adding night

flights "would likely be imperceptible to residents." This doesn't make common sense. ES-3-ES-4 "These expansions in the noise contours would be imperceptible to the residents as the changes in contours would be less than 50 feet. Public safety risks would not be measurably increased under any of the alternatives." These conclusions are based on incomplete data used in the noise modeling and noise averaging. Common sense tells us that you can't double the number flights and introduce night flights and have no significant impact on the quality of life and safety of the residents in an area already identified in violation of Environmental Justice Regulation .

* Other Alternatives Needed

The EA fails to investigate reasonable alternatives for basing the Operation Snowbird program. An EIS is needed to thoroughly investigate

other possible locations in less encroached areas.

P. ES-3, L 20 "unacceptable break or delay in combat aircrew training for the ANG and their training partners." OSB operated out of TIA during the resurfacing of the D-M runway.

False or Misleading Statements and Sins of Omission

There is a failure of the document to adequately explain the meaning and significance of Runway 12 and Runway 30 and the relationship to the

circular flight path over a large area of central Tucson. Runway 12 and Runway 30 refer to compass directions. There is only one runway.

P-2-9, L 15-18 "To further abate noise, departures would use Runway 12 and arrivals would use Runway 30, to the extent practicable. This action would concentrate the majority of the air traffic noise southeast of DMAFB and away from the majority of the population near downtown Tucson."

This statement is blandly false and misleading. The number of departures to the SE (Rita Ranch area) and landings which circle over the central City

to the Julia Keen Neighborhood, ARE ABOUT THE SAME. (Wind conditions and Operation Noble Eagle may reverse the direction in a small percentage of take-offs and landings.) The idea that most of noise is to the SE is misleading and fails to mention the circular flight path over the City,

mentioning only the population near downtown Tucson. (Note: Night-time downtown population would be small vs. a large population in Midtown Tucson. The document fails to mention that the area to the SE is relatively unencroached due to the open space "Paddle" created during the 2003-4 JLUS. On the other hand the area to NW of DM and the Central City are densely populated. It is highly misleading to only mention downtown Tucson and

lead the public to believe that the noise will be concentrated to the SE. The. number of take-offs to the SE and circular landings over the densely populated City would be about the same.

* Re: Night Flights

ABSOLUTELY NO to NIGHT FLIGHTS OVER METRO TUCSON

On page 3-2, line 5 & 6 "People are typically more sensitive to elevated noise levels during the evening and /or night hours when human activity may be more relaxed."

How about simply saying that people are likely trying to sleep. Sleep/rest is an important restorative function for all living organisms.

Law Office of Williamson & Young, PC

Kathleen G. Williamson, J.D., LL.M., Ph.D.

PO Box 249 TUCSON, AZ 85702-0249

kgw@williamsonandyoung.com <mailto:kgw@williamsonandyoung.com>

www.williamsonandyoung.com (520) 623-8414 Tucson, AZ From: Jean de Jong [mailto:loct2985@yahoo.com] Sent: Saturday, August 18, 2012 1:30 PM To: 355 FW/PA 355th FW Public Affairs Cc: Tucson Forward Subject: OSB EA Comment Submittal"

Attention: OSB EA Comment Submittal

355th Fighter Wing Public Affairs

3180 S. First Street

Davis Monthan AFB AZ 85707

August 18, 2012

Dear Sir/ Madam:

The Snowbird EA process and report looks suspiciously like it has been distorted and bastardized to accommodate the desired wishes of the AF and its local supporters, particularly the DM-50 and military benefitting local industries (beer and transport and entertainment) with very little honest legitimate analysis of the negative impact to the health, safety concerns, property value and quality of life of the homeowners and businesses of midtown Tucson NW of DMAFB. It is twisted to present information and itself as something that it is not in order to push through a military program of potentially severe devastation to so much of the Tucson midtown community that it doesn't do what EA's were intended to do - to honestly, without prejudice look into the health and safety effects of new AF activity to the citizens and environments that would be directly and indirectly impacted and to then determine whether the change in military activity can take place at all, in an alternate I! ocation, or as projected. It was never the intention of the originators of the EA process to have the military and its supporters decide what they want and then twist the EA analysis procedure and data findings to get what they want regardless of the impact to humans and the envoronment. It was meant to give some protection and voice to those less powerful than the military industrial complex. I would say that this particular Operation Snowbird EA is an A+ example of distortion, dishonesty, deceipt and the misuse of power. This EA is set up to bring in domestic and foreign pilots flying any kind of jet, including F-22s and F-35s any time of day or night, almost doubling the number of flights over midtown Tucson. What kind of drug were the 'qualified?' statisticians taking when they came to the conclusion that the above conditions were no different in their impact to citizens and the environment than having a few US squadrons stationed at DM from February to April? The main ! thrust of the official AF 1978 letter written to the ciizens of Tucson

following the A-7 (single engine) crash that killed two women on Highland and 5th was to acknowlege that flights over the City needed to be reduced in number because of the safety concern to the citizens of Tucson and the University population. So besides replacing the A-7 with the A-10 (double engine) much of the visitor traffic was redirected and stationed away from the City. For the Air Force to acknowlege back then that many fewer overflights was a great risk but doubling the number of those overflights today is of no significant impact is an amazing twist of logic and mental magical thinking - not science.

In summary:

(1) I don't support the OSB Expansion Proposal.

(2) The EA is extremely difficult for the general public to follow; full of technical jargon; conclusions that don't appear to be supported; references to unknown studies (2007 Noise Study); confusing alternatives.

(3) We badly need a professionally prepared Environmental Impact Statement with conclusions supported by the analysis.

Yours truly,

Jean de Jong

2726 E. Malvern St.

Tucson AZ 85716

520 323-6870

loct2985@yahoo.com

From: J Kold [mailto:jtktsn@yahoo.com] Sent: Sunday, August 19, 2012 1:28 PM To: 355 FW/PA 355th FW Public Affairs Subject: OSB EA Comment Submittal

August 19, 2012

Dear 355th Fighter Wing Public Affairs Spokespersons,

Thank you for this opportunity to express my opinion on DMAFB's Operation Snowbird's progress. I attended an information session sponsered by D_M for the public to learn more about Operation Snowbird last fall and really appreciated the chance to speak with Air Force personnel about the details and plans of this upcoming program.

I am hopeful that our local Air Force Base will take Tucson's residents' interests into consideration as the assessment process continues.

I understand the number of planned flights are expected to double, and the noise impact of such a change is difficult to accurately predict. However, a D-M Community Relations Committee has designed a noise chart that shows an F-18 or Harrier approaching over a homesite I own near Columbus and Broadway could be

5 times as loud as an A-10. Believe me, the noise levels of the existing aircraft are currently unacceptable in mid-day, much less at night, when night training flights will be allowed under OSB.

I understand the F-18's, Harriers, and F-22's are some of the noisiest aircraft and that a current environmental impact assessment of these planes does not exist and the original 2007 study results are unavailable to the public.

As a Tucson area resident, who's current quality of life is negatively impacted by the existing D-M flight patterns and noise, I respectfully request a thorough and accurate Environmental Impact Statement (EIS) of Operation Snowbird be conducted and released to the taxpayers who live in the Tucson community.

The decision to launch OSB should await input from a well-informed Tucson community-based constituency who will be most affected by any such decision.

Thank you very much, Jhan Kold 5310 E Holmes St. Tucson, AZ 85711 From: Campbell, Christopher A TSgt USAF ACC 355 FW/PA On Behalf Of 355 FW/PA 355th FW Public Affairs Sent: Monday, August 20, 2012 4:36 PM To: Dalrymple, Nicole M Civ USAF ACC 355 FW/PA Cc: Harrington, Susan M 1stLt USAF ACC 355 FW/PA Subject: FW: OSB EA Comment Submittal

Ma'am,

You are very popular with the emails.

Thank you,

TSgt Campbell

From: Kathleen Williamson, Esq. [mailto:kgw@williamsonandyoung.com] Sent: Friday, August 17, 2012 9:24 PM To: 355 FW/PA 355th FW Public Affairs Subject: OSB EA Comment Submittal

ATTN: OSB EA COMMENT SUBMITTAL 355th Fighter Wing Public Affairs 3180 S. First Street Davis-Monthan AFB, AZ 85707

mailto:355WGPA@dm.af.mil

757-764-5994 (Air Combat Command Public Affairs) or 228-3398 (D-M Public Affairs)

(Sent via email rather than telephonically or snail mail)

Dear OSB EA Comment Panel:

I thoroughly agree with the Tucson Forward position regarding the flaws and biases of the EA recently conducted regarding Operation Snowbird in Tucson. I lived under that flight path for 20 years (4th and Lee area). It has had a bad impact on Tucson all these years but has gotten worse since the early 2000s. Now it threatens to double and include night flights while presenting a skewed EA claiming that these increases would not have a negative impact on Tucson. It already does and the negative impact would

double at a minimum. Also, night flights is an obnoxious idea. We have rights to quiet enjoyment of our homes and rights to safety from jet accidents and air pollution caused by over head flights. The US military is the largest consumer of fossil fuels in the world, at taxpayer's expense and is dumping its toxic waste on American citizens. To make matters worse, it allows foreign pilots to train over the homes of American citizens in urban areas like Tucson. Tucs!

on has invested tremendous amounts of money in urban planning and historic preservation, all of which suffers under the noise and danger of overhead flights. If our town council and county government cared about citizens at all, they would object to the degredation of our beautiful area and lives due to overhead flights.

Do not double the damage you already do to Tucson.

Regarding the faulty EA, here are just a few comments:

Environmental Justice

Cover Letter, lines 47-49 "There would be no additional disproportionately high and adverse impacts on minority and low-income populations near DMAFB compared to those impacts associated with No Action Alternative." The Table 2-4 on page 2-13 does identify a minority low-income area that is disproportionately impacted under the OSB "No Action Alternative" and yet it concludes that doubling the number of OSB sorties and adding night

flights "would likely be imperceptible to residents." This doesn't make common sense. ES-3-ES-4 "These expansions in the noise contours would be imperceptible to the residents as the changes in contours would be less than 50 feet. Public safety risks would not be measurably increased under any of the alternatives." These conclusions are based on incomplete data used in the noise modeling and noise averaging. Common sense tells us that you can't double the number flights and introduce night flights and have no significant impact on the quality of life and safety of the residents in an area already identified in violation of Environmental Justice Regulation .

* Other Alternatives Needed

The EA fails to investigate reasonable alternatives for basing the Operation Snowbird program. An EIS is needed to thoroughly investigate

other possible locations in less encroached areas.

P. ES-3, L 20 "unacceptable break or delay in combat aircrew training for the ANG and their training partners." OSB operated out of TIA during the resurfacing of the D-M runway.

False or Misleading Statements and Sins of Omission

There is a failure of the document to adequately explain the meaning and significance of Runway 12 and Runway 30 and the relationship to the

circular flight path over a large area of central Tucson. Runway 12 and Runway 30 refer to compass directions. There is only one runway.

P-2-9, L 15-18 "To further abate noise, departures would use Runway 12 and arrivals would use Runway 30, to the extent practicable. This action would concentrate the majority of the air traffic noise southeast of DMAFB and away from the majority of the population near downtown Tucson."

This statement is blandly false and misleading. The number of departures to the SE (Rita Ranch area) and landings which circle over the central City

to the Julia Keen Neighborhood, ARE ABOUT THE SAME. (Wind conditions and Operation Noble Eagle may reverse the direction in a small percentage of take-offs and landings.) The idea that most of noise is to the SE is misleading and fails to mention the circular flight path over the City,

mentioning only the population near downtown Tucson. (Note: Night-time downtown population would be small vs. a large population in Midtown Tucson. The document fails to mention that the area to the SE is relatively unencroached due to the open space "Paddle" created during the 2003-4 JLUS. On the other hand the area to NW of DM and the Central City are densely populated. It is highly misleading to only mention downtown Tucson and

lead the public to believe that the noise will be concentrated to the SE. The. number of take-offs to the SE and circular landings over the densely populated City would be about the same.

* Re: Night Flights

ABSOLUTELY NO to NIGHT FLIGHTS OVER METRO TUCSON

On page 3-2, line 5 & 6 "People are typically more sensitive to elevated noise levels during the evening and /or night hours when human activity may be more relaxed."

How about simply saying that people are likely trying to sleep. Sleep/rest is an important restorative function for all living organisms.

Law Office of Williamson & Young, PC

Kathleen G. Williamson, J.D., LL.M., Ph.D.

PO Box 249 TUCSON, AZ 85702-0249

kgw@williamsonandyoung.com <mailto:kgw@williamsonandyoung.com>

www.williamsonandyoung.com (520) 623-8414 Tucson, AZ From: Victor Shamas <u>[mailto:vshamas@hotmail.com]</u> Sent: Friday, August 24, 2012 4:35 PM To: 355 FW/PA 355th FW Public Affairs Subject: OSB EA Comment Submittal

Dear 355th Fighter Wing Public Affairs Spokespersons,

Thank you for this opportunity to express my opinion on DMAFB's Operation Snowbird's progress. I attended an information session sponsered by D_M for the public to learn more about Operation Snowbird last fall and really appreciated the chance to speak with Air Force personnel about the details and plans of this upcoming program.

I am hopeful that our local Air Force Base will take Tucson's residents' interests into consideration as the assessment process continues.

I understand the number of planned flights are expected to double, and the noise impact of such a change is difficult to accurately predict. However, a D-M Community Relations Committee has designed a noise chart that shows an F-18 or Harrier approaching over a homesite I own near Columbus and Broadway could be

5 times as loud as an A-10. Believe me, the noise levels of the existing aircraft are currently unacceptable in mid-day, much less at night, when night training flights will be allowed under OSB.

I understand the F-18's, Harriers, and F-22's are some of the noisiest aircraft and that a current environmental impact assessment of these planes does not exist and the original 2007 study results are unavailable to the public.

As a Tucson area resident, who's current quality of life is negatively impacted by the existing D-M flight patterns and noise, I respectfully request a thorough and accurate Environmental Impact Statement (EIS) of Operation Snowbird be conducted and released to the taxpayers who live in the Tucson community.

The decision to launch OSB should await input from a well-informed Tucson community-based constituency who will be most affected by any such decision.

Thank you very much, Victor Shamas 5310 E Holmes St. Tucson, AZ 85711 From: phmore@cox.net [mailto:phmore@cox.net] Sent: Saturday, August 25, 2012 8:43 AM To: 355 FW/PA 355th FW Public Affairs Subject: EIS for Snowbird ops

I am writing to request that the Operation Snowbird EIS be revisited in terms of -accuracy, -inclusiveness of critical information (such as how the noise impacts were assessed), -and the actual aircraft and flight patterns associated with Snowbird program.

I also request that the EIS explicitly include -ALL aircraft likely to be flying here, -the types of aircraft being flown and details about their noise levels and safety records - including how these factors were determined -the schedules of flight activity by type of aircraft

Further, there needs to be genuine community interaction once the revised EIS is issued, not just providing a few military folks standing around to answer questions - for which, of course they have prerehearsed answers and no interest in genuine engagement with community members. We have many very smart people who are interested in achieving a workable solution to the noise and safety issues, and who are more than ready and willing to work toward a mutually satisfactory arrangement.

Like many of my neighbors and colleagues, I think it would be a huge mistake to shut down D-M, and I support keeping it here with a mission that conforms to contemporary urban realities in Tucson. I acknowledge that we Americans need military strength and expertise to survive and prosper in the world, and that D-M contributes to our national security.

In general, I am less sure that Snowbird training activity belongs here. Over the long term I advocate moving it out of the urban zone to a remote area such as the Barry Goldwater Range. My rationale is this: if pilots are supposed to be learning how to fly in remote desert environments, then they should also be learning how to live and fly in those environments. They could be shuttled to D-M Tucson if they absolutely need a day or two away from the training grounds and if local bars and other businesses need their dollars. In the meantime, a better accommodation between Snowbird and civilian concerns really does need to be accomplished.

Thank you for your consideration,

Barbara Morehouse 2709 E. Malvern Street, Tucson From: Karen Copley [mailto:kfmcopley@hotmail.com] Sent: Saturday, August 25, 2012 7:43 AM To: 355 FW/PA 355th FW Public Affairs Subject: Operation Snowbird -noise

To Whom It May Concern-

I am in complete support of this program. As a resident of the NW part of Green Valley, I do not hear all of the noise, but we do receive a fair amount of flyovers.

As the member of the 1% of Americans whose family members are currently serving our country (daughter and 2 son-in-laws) and the widow of a Vietnam era 100% disabled Marine, I realize I may have a different view than many....but as far as I am concerned anything that we regular citizens need to do to support the training efforts of our military is small in comparison to what we expect from those actually serving.

Thank you.

Karen Burns Copley 1670 N Rio Chico Green Valley, AZ From: Bonnie Poulos [mailto:btpoulos@hotmail.com] Sent: Saturday, August 25, 2012 7:35 AM To: 355 FW/PA 355th FW Public Affairs Subject: Snowbird expansion at Davis Monthan Air Force (DMAF) Base in Tucson Arizona

Dear Sirs,

I am writing to request that a full environmental assessment be conducted by an impartial third party concerning the proposed doubling of Davis Monthan Air Force flights over the city of Tucson, where I live. I have read summaries of the current report written by the Air Force and believe that much more information and study needs to be completed before a decision is made concerning this increase in activity. I live many miles away from the DMAF base but I too am affected by noise from the current aircraft and flights that circle overhead and disrupt my life. I also work at the University where there are times when one must shout to be heard over the scream of the aircraft heading to and from DMAF base. I also hike in the Aravaipa Canyon wilderness area northwest of Tucson where I have personally witnessed hotdog pilots flying fighter jets down below the rim of the canyon such that we could smell the fumes from the burnt fuel of the aircraft. Considering the urbanized areas that DMAF base flights fly over, and the ongoing remediation efforts of homes that were built to accommodate lower income people in our community, and the past history of deaths in Tucson related to crashed Air Force planes, it behooves us to do the very best job of accurately assessing the impact that a doubling of the flights and the inclusion of foreign pilots and planes over our great city will cause.

In order for an environmental assessment to be credible it must also be conducted by those who do not have a vested interest in the outcome of the assessment. Although the DMAF base provides an important economic base for our community, many other economic factors must be considered before a decision can be fairly made as to whether expansion of the intrusive activities of the base is warranted. Personally, I believe that this plan is solely to justify the continued existence of the DMAF base and has little to do with the best interests of the USA. I also do not believe that an urbanized area such as Tucson should be the training grounds for new, louder, and more aircraft.

Thank you for taking all of our opinions into account in your decision concerning the expansion of the overflight activities at DMAF.

Sincerely,

Bonnie Poulos

1208 E. Smoot Dr.

Tucson, AZ 85719

From: Anita Valdez [mailto:valdezosb@gmail.com] Sent: Saturday, August 25, 2012 9:01 AM To: 355 FW/PA 355th FW Public Affairs Subject: comment

How is it possible that an increase of noise to 120 decibels and adding flights, even flying at night does not make a big difference in an increasingly urban area??

Who wants to live with such noise??

Thank you for your attention,

SAnita

From: Mark Zajicek [mailto:mzroadie@gmail.com] Sent: Saturday, August 25, 2012 8:29 AM To: 355 FW/PA 355th FW Public Affairs Subject: Operation Snowbird

I live over 10 miles from D-M and am negatively impacted by the jet noise circling for takeoff and landing. I am vehemently opposed to the proposal to double the annual number of flights, inclusive of night traffic. I would much prefer your jockeys go supersonic & practice strafing cactus on the Mohave desert.

From: Cynthia Pearson <u>[mailto:pearsonc@u.washington.edu]</u> Sent: Sunday, August 26, 2012 7:37 AM To: 355 FW/PA 355th FW Public Affairs Subject: OSB EA Comment Submittal

Dear Sirs and Madams,

We object to the EPA Operation Snowbird Environmental Assessment findings and purposed expansion of the Snowbird operations. My home is 3021 W San Juan Dr 85713. We are right under the TIA runway flight pattern.

It's odd to me that doubling the number of flights resulted in a finding of "No Significant Impact." (FONSI). That's even conceding the base year was appropriate - an issue that can certainly be debated since the mission has grown so significantly since its inception. I understand that going from about 1,100 to about 2,200 sorties is a small percentage (7%) of what comes out of DM. As a data analysis I am aware that depending on how you approach the question and analyze the data you can come to a variety of conclusion. The increase could be looked at as another 1,100 flights and that would also be accurate. And that could lead you to a different conclusion as to the impact of one Alternative over another.

Noise contours are developed by taking an average of the daily flight noise over a 24 hour period. That means individual aircraft flying overhead will yield higher dB than the average since the dead time when no planes are flying overhead dilute the data towards the down side. That is an approved FAA technique for measuring noise levels. Both my husband and I work from home. As it is now, when the military jets fly over (usually in no stop 30-45 min periods) we cannot not concentrate, participant in conference calls or even talk to each other. The nose level during our waking hour is TOO MUCH and realistically the impact should be assessed based in the times the planes do fly. Be waken before dawn and late at night is extremely disrupted to my sleep and thus overall wellbeing.

Please an honest assessment of the impact is all were really asking for and to find a suitable solution - preferably one that create less harm than the current situation.

It's one thing to hear and consider the voice of people who live on the outskirts of town away from the noise as compared to those whose lives and simple ability to have a conversation is interrupted. I suggested comments should be taken as a weighted value with those most affected should be weighted more than those who sit up in the mountain watching from a distance.

Please do an honest assessment. Assess noise in the time period planes fly. Come stay at our house for a week. Sit on our porch, or in our office try to work, try to sleep, try to live with what we have now and then think of expanding that.

Sincerely

Carl and Cynthia Pearson

3021 W San Juan Dr.

Tucson AZ 85013

Cynthia R. Pearson,

Voice/Cell: (206) 330-1997 <<u>tel:%28206%29%20330-1997</u>>, FAX: (206) 543-1228 <<u>tel:%28206%29%20543-1228</u>> E-mail: <u>pearsonc@uw.edu</u> <<u>mailto:pearsonc@uw.edu</u>> From: Ken Zablotny [mailto:dragracers@cox.net] Sent: Monday, August 27, 2012 4:24 PM To: 355 FW/PA 355th FW Public Affairs Subject: OSB EA Comment Submittal

Good afternoon: I would like to take a moment to express my strong objection to "Operation Snowbird" being discussed in the shadows by the US Air Force to increase training flights at DM airbase. It is an unnecessary use of taxpayer dollars, a dramatic increase in noise by all modes of military aircraft in and around my personal residence. The current activity that occurs at DM with the flights of F-16's, Warthogs, transports, etc by those "jet jockys" with high testosterone levels is invasive to my quality of life. What is currently the # of sorties that come and go from DM is borderline acceptable (except after 10 PM) but any more flights from this insane operation is not acceptable.

Thank you for your time in registering my comments.

Ken Zablotny Broker/Owner Licensed in the State of Colorado Licensed in the State of Arizona

Cell Phone: 303.995.9117 Direct: 303.835.8392 From: azbride@cox.net [mailto:azbride@cox.net] Sent: Friday, August 31, 2012 8:09 AM To: 355 FW/PA 355th FW Public Affairs; Simmons, Jonathan D Capt USAF ACC 355 FW/PA Subject: Request for Operation Snowbird EA in Spanish

Dear Sirs,

As Co-Chair of the Julia Keen Neighborhood Association, I would like to request that the Operation Snowbird Draft EA be made available in the Spanish language. I previously had requested this from Capt. Simmons. Many in our neighborhood speak only Spanish, which is considered disproportionately impacted by the aircraft noise from Davis-Monthan Air Force Base. We are located directly under the flight path of DM AFB and are extremely affected.

Please let me know as soon as possible where a copy of the Operation Snowbird Draft EA can be obtained in Spanish as the deadline for our comments is September 14, 2012.

Sincerely,

Rita Ornelas Julia Keen Neighborhood Association, Co-Chair 3679 E. 33rd St. Tucson, AZ 85713

(520) 318-0595 home (520) 954-4911 cell From: Eudene Lupino [mailto:eudenepaul@mac.com] Sent: Friday, August 31, 2012 12:18 PM To: 355 FW/PA 355th FW Public Affairs Subject: Operation Snowbird

I oppose the expansion of Operation Snowbird in Tucson for several reasons, the most important of which is the diminishing quality of life here the expansion will initiate and exacerbate. Tucson is a city situated in the unique Sonoran Desert, with wildlife and native fauna still an integral part of its identity, albeit, mostly now surrounding the city proper. Many of us who life here do so in harmony as concerted stewards of the environment, one of the few places left to sustain in such a non-intrusive way. Many ordinances and practices have been enacted in order to slow the demise of the desert and to stop the banishment and eradication of its native species. The noise levels and frequency of flights of an expanded Operation Snowbird will negate all the civic and individual efforts to ensure serenity. Tucson is not Phoenix, nor is it Yuma. Tucson is unique; Tucson is all about "place," and Tucson will lose its unique character as blaring jets darken the sky and break eardr!

ums everywhere, not just near the air base. It is right to consider many factors that contribute to a place's health and sustainability, especially environmental sustainability, especially now. Tucson is surely a premier location to seek to favor its unique character, its place.

Eudene Lupino 4651 N El Adobe Ranch Rd Tucson, AZ From: zelnio [mailto:zelnio@cox.net] Sent: Friday, September 07, 2012 4:00 PM To: 355 FW/PA 355th FW Public Affairs Subject: Attn: OSB EA Comment Submittal

355th Fighter WIng Public Affairs 3180 S. First Street Davis-Monthan AFB, AZ 85707

Dear Sirs,

I am writing to express my concern over the incomplete content of the draft environmental assessment report regarding the expansion of Operation Snowbird, based at Dais-Monthan Air Force Base. I live and work in the Broadmoor neighborhood and am directly affected by this activity on a daily basis. The recently released draft EA is difficult, if not impossible, for the general public to understand. It appears to be missing critical analyses and offers unsupported conclusions. I am particularly concerned about the incomplete safety data and that there is no assessment of the OSB flight pattern over Broadmoor and other midtown neighborhoods.

I request a full, objective environmental impact statement that more accurately assesses the impact of OSB expansion on the surrounding Tucson community prior to any decision.

Thank you

Debra Zelnio 2820 E. Croyden Street Tucson, AZ 85716 From: Linda Abrams [mailto:labrams2930@yahoo.com] Sent: Monday, September 10, 2012 7:42 PM To: 355 FW/PA 355th FW Public Affairs Subject: flights over Tucson

I wish to respond to the report of increasing flights over Tucson. My area, the Broadmoor neighborhood, is very affected by the flights. It is difficult to have peace and quiet in our vicinity as it is, and the thought of even more flights is a worry. One of my neighbors is actually moving out of Tucson because of the disturbing noise and vibrations of the flights.

Please, please, do not increase the flights, and the accompanying noise. It greatly worsens our quality of life. Flights of this nature should be over relatively empty areas, not densely populated urban areas such as Tucson.

Respectfully submitted,

Linda K Abrams 2930 E Manchester Tucson, Az 85716 520-326-4815 From: Susan Pitt [mailto:sgpitt.1@gmail.com] Sent: Monday, September 10, 2012 11:00 AM To: 355 FW/PA 355th FW Public Affairs Subject: ATTN:OSB EA COMMENT SUBMITTAL

September 10, 2012

ATTN: OSB EA COMMENT SUBMITTAL 355th Fighter Wing Public Affairs 3180 S. 1st Street Davis-Monthan AFB, AZ 85707

Re: OSB EA Comment Submittal

I am writing to object to the draft EA for Davis-Monthan Air Base in Tucson, AZ, and to state my objections to the expansion of Operation Snowbird based at DM. There are numerous and important reasons for limiting the numbers and types of aircraft flying in and out of DM and I am sure you have received many letters stating all of these.

The types of proposed aircraft and the doubling of the numbers of flights proposed is unreasonable and dangerous to our community. Tucson is a large, but still developing metropolitan area; it's main business area and the largest portion of its population lie directly under the paths of these aircraft. Today's aircraft are generations away from those which flew over Tucson even a few years ago. If, for no other reason than safety (and there are MANY more-which you have no doubt heard), the proposed expansion should not occur. We have a University and downtown area entitled to safety and the reasonable expectation for healthy growth which cannot be achieved and maintained if the proposed numbers and types of aircraft are allowed to fly over these densely populated areas.

Arizona has other legitimate, safer, and suitable places to house and train these aircraft and their missions.

Susan Pitt 445 S. Via Golondrina Tucson, AZ 85716 sgpitt.1@gmail.com From: Pat Birnie [mailto:patbirnie@greenbicycle.net] Sent: Tuesday, September 11, 2012 8:31 PM To: 355 FW/PA 355th FW Public Affairs Subject: OSB Comment Submittal

355th Fighter Wing Public Affairs 3180 S. First Street Davis-Monthan AFB, AZ 85707

Re: OSB Comment Submittal

To U.S. Air Force Public Affairs Officials:

My comments are on behalf of the Tucson Branch of the Women's International League for Peace and Freedom, of which I am a member. We have reviewed the EA provided for the proposed expansion of the Operation Snow Bird practice at Davis-Monthan Air Force Base in Tucson, AZ.

We find it extremely hard to believe that almost doubling the number of flying sorties, including adding night training sessions, could result in a Finding of No Significant Impact. It appears to us that the study was conducted by computer analyses and "averaging" decibels that had little to do with actual Noise Measurements, especially for the night flights. Were the noisiest planes included in the analysis? Real people hear the extreme highs, and don't do "averaging" of noise. In addition to unacceptable increase in noise levels, we believe that other factors would be negatively impacted: public safety, property values, socioeconomic concerns, and environmental justice, as well as cumulative impact.

Therefore we strongly urge that a full Environmental Impact Study and Statement be conducted. And next time around, please involve public input to a higher degree. For an issue as important as this, there should have been public hearings to review the findings, and for the Air Force to receive comments from the public.

We are deeply concerned that expansion of the OSB at Davis-Monthan would be a ruse to bring the untested, dangerous, noisy F-35 to Tucson for training flights. Wording of the EA leaves that option as a real possibility. That would be totally unacceptable in terms of noise, public safety, socioeconomic factors, environmental pollution and more.

Of the 4 alternatives offered in the EA, it appeared that there were such little difference between the options, that it was pointless to offer them. Even the "No Action" option was not really an alternative. The subject of Alternate Locations for the expanded OSB DOES make sense, though. It is disappointing that Gulf South Research Corporation didn't take seriously this suggestion that came from the scoping meetings prior to the EA study. All of the (not considered) stated alternate locations are in Arizona. Gila Bend and Libby Army Airfield were dismissed because of the capital investment required, and time needed to build the needed infrastructure. But no excuses were given for disregarding the option of Luke. With the F-35 to be based at Luke, wouldn't it make sense to also base the OSB there, too? Why were bases in New Mexico or Nevada not considered as alternate locations for OSB? We think such an important operation should be located in a much less densely !

populated area than Tucson. Both New Mexico and Nevada have this same arid climate...the talking point and advantage of Tucson. BUT TUCSON HAS A DENSELY POPULATED AREA TOO CLOSE TO Davis-

Monthan AFB, causing a constant risk and threat to residents who live under the flight path of all flights at D-M.

If OSB were to be located away from Davis-Monthan, and if D-M should feel lonely at the loss, then we would strongly advocate that the whole of the Air National Guard be transferred to Davis-Monthan, and vacate its presence at the Tucson International Airport. We find it incompatible to have the civilian airport so inter-twined with the military missions of the Air National Guard.

One final comment: I found it very difficult to understand the Environmental Assessment, though I really tried. It is very technical, using so much jargon and acronyms that it was a challenge to understand. It almost seemed like a booster report, not an objective environmental assessment.

Conclusion:

We advocate that a full Environmental Impact Study and report be conducted in regard to the proposed expansion of the Operation Snow Bird program at Davis-Monthan AFB.

Thank you,

Patricia Birnie, Legislative Chair Tucson Branch, Women's International League for Peace and Freedom 5349 W. Bar X Street, Tucson, AZ 85713-6402

520-661-9671

patbirnie@greenbicycle.net

From: Peggy Flyntz [mailto:peggyflyntz@hotmail.com] Sent: Wednesday, September 12, 2012 6:22 PM To: 355 FW/PA 355th FW Public Affairs Subject: Operation Snowbird

To whom it may concern:

I am writing to express my concerns about the possible expansion of Operations Snowbird, based at Davis Monthan Air Force Base. This expansion would substantially increase the number of flights already occurring and include also night training flights. Yet somehow the recent assessment concludes that this will have no significant impact on the surounding commuity. This assessment is flawed by selectivity and presentation of data, which seriously understate the number of residents impacted by noise. And, as usual, this would affect most deleteriously minority and low-income propulations adjacent to the base, most of whom are already seriously effected by the noise of the current flights.

There has been insufficient effort to reach out for community involvement. No notices were sent to the population that already is disproportionately impacted by aircraft noise. And among those who were involved, at the scoping meetings in the densely-populated mid-town area, there was a high public turn-out--and generally great opposition to the expansion. Furthermore, not enough consideration has been given to the effects of the expansion on tourism, a major industry in the area. Concerns about the impacts of an expansion of OSB activity on the tourism industry were expressed by citizens at public meetings and in written comments. Anecdotal information presented cites' noise as causing an adverse impact on tourism-industry businesses. The economic impact on tourism, one of Tucson's major industries, needs to be done in an EIS. And property values in those areas will most certainly be affected as well by the unwelcome noise created by an increase in military aircraft flights!

Finally, the expansion of OSB will increase the risk of accidents in densely populated areas. The safety record of the F-22 has received much publicity, raising doubts about the wisdom of allowing flights over large populations. And no mention has been made by EA of the crashes by military aircraft that occurred in neighborhoods in San Diego, Virgnia Beach, Yuma, and Marana in recent years or the crash of a D-M jet near the University of Arizona in 1978.

The OSB Draft EA is sorely lacking not only in detail, but in accuracy. A full EIS is clearly needed--in plain English; not the DEA's jargon and acronyms that are not easily understood by the general public.

Thank you for reading my comments and considering my point of view.

Margaret Flyntz

1611 E. Mitchell St
Tucson, AZ 85719

peggyflynz@hotmail.com

From: William Hubbard [mailto:hubbard@dakotacom.net] Sent: Wednesday, September 12, 2012 12:36 PM To: 355 FW/PA 355th FW Public Affairs Subject: ATTN: OSB EA COMMENT SUBMITTAL

355th Fighter Wing Public Affairs 3180 S. First Street Davis-Monthan AFB, AZ 85707

I have some comments about a document entitled MISSING GAPS AND INFO - DRAFT OPERATION SNOWBIRD ENVIRONMENTAL ASSESSMENT written by a group that styles itself Tucson Forward (TF).

At the end of the TF document, a statement refers to "the breakdown in relations between the Tucson community (particularly those under the flight path) and Davis-Monthan that has occurred since 2000." I take particular issue with that claim.

I live right under the landing flight path. I have lived at this same address in the Broadmoor subdivision for 39 years. When my daughters were in kindergarten, we had military aircraft overhead. Now when we babysit our grandchildren, there are military aircraft overhead. We could have moved to the Foothills years ago, but I love Broadmoor for its proximity to my work at the U of A, for the wildlife, and for the aircraft.

I am a member of the 93rd Bombardment Group, a memorial society that pays tribute to the veterans, living and dead, of that storied Air Force unit. Last November, the 93rd BG had its annual reunion in Tucson, and it was my privilege to attend and to introduce my grandson to some remarkable people, many of them living in Tucson. We were hosted at the DMAFB Officers Club by Col. Meger, Vice Commander of the 355th Fighter Wing. So I would say that relations between DMAFB and the Tucson community, including me under the flight path, are excellent.

At my home on Devon Street, we see hummingbirds, bees, butterflies, hawks, occasional javelinas and coyotes, and right overhead we frequently see A-10s, F-16s, C-130s, C-17s, Blackhawks, etc. There is also the rare treat: at the biennial DMAFB Air Show, we get to see the Thunderbirds disperse, reform, scream right over the house. Sometimes we see vintage aircraft such as Mustangs and B-17s. Earlier this year I heard the roar of Pratt & Whitney aircraft engines, went out, and saw the Collings B-24 coming in for a landing at DMAFB. What a treat.

So what is the main safety threat to Tucson? Every year dozens of people are killed in traffic accidents here. In 2003 we even had a car crash into one of our family's houses near the U of A. But over the 40 years that I have lived here, there has been only the single military air crash that killed two people in 1978. Much could be done about the traffic safety problem, but it is hard to imagine that much more could be done to improve military air safety. In fact, I have utter confidence in the skill and dedication of the young military pilots at DMAFB.

Please disregard the TF critique. It is a labored attempt to arouse concern about a nonexistent problem.

Sincerely yours, William B. Hubbard 2618 E. Devon St. hubbard@dakotacom.net From: gary hunter [mailto:garyahunter@gmail.com] Sent: Wednesday, September 12, 2012 8:03 PM To: 355 FW/PA 355th FW Public Affairs Subject: ATTN: OSB EA Comment Submittal

Sirs:

Section 1.2 of the draft Operation Snowbird Environmental Assessment indicates that EAs in 1995 and 1999 had analyzed the environmental impacts of the flights of OSB aircraft. In fact, neither EA provided such an analysis; the two EAs considered only the impacts of constructing facilities on the ground.

Section 1.2 states, "The 1995 EA and associated Air Force memoranda indicated that the number of National Guard units participating in OSB training at DMAFB ranged from 13 to 15 annually and that the OSB was no longer considered a 'wintertime' only mission." This is a simple statement of fact. It is not an environmental analysis, and it provides no justification under the National Environmental Policy Act for expanding OSB to 13 or 15 National Guard units, or for expanding OSB beyond wintertime operation.

Section 1.2 states the 2002 CSAR EA "included analysis of OSB activities." Section 1.4 states the CSAR EA "had tangentially analyzed OSB sorties." Section 2.3 states OSB aircraft were "analyzed in the 2002 CSAR EA." All three of these statements are false. The CSAR EA included no analysis of OSB aircraft. As Section 2.3 notes, the CSAR EA acknowledged OSB aircraft only by including them in its Table 2.3-4 as "Other" aircraft. This obscure note in a table of sorties does not constitute an environmental analysis.

The Air Force is fully aware that the 1995, 1999, and CSAR EAs provided no analysis of OSB aircraft or operations. The undersigned pointed this out in a letter submitted to the Air Force during the scoping phase of the current EA.

The Air Force is dishonest to indicate in the current EA that any of these three prior EAs had included an analysis of OSB aircraft.

Section 1.2 refers to an OSB EA that was completed in 1978. In fact, this is the only analysis the Air Force has ever made of the environmental impacts of OSB aircraft.

In the words of the 1978 EA, it would "enable northeastern Air National Guard units to deploy to Davis-Monthan AFB, AZ, with sufficient equipment and personnel to conduct deployed tactical training/operational readiness inspections for two week periods basically between the months of January through April." The EA covered "an average of twenty sorties a day during weekdays . . . conducted during normal duty hours at Davis-Monthan AFB, 0800 - 1700." Aircraft covered by the EA were the A-7 and F-100, with the A-10 replacing the F-100 after FY 79.

This is the baseline that the Air Force must use.

During the scoping phase of the current EA, the Air Force recognized that it must use a baseline that is supported by an earlier environmental assessment. At that time, the Air Force proposed to use the CSAR EA as its baseline. In the words of the Air Force, the CSAR EA is "the assessment OSB currently operates under."

Members of the public pointed out the CSAR EA included no analysis of OSB. Now the Air Force has changed its mind; it has decided to use a baseline that has never had an environmental analysis.

The Air Force intends to use 2009 as its baseline. The sole justification for this baseline is that it is "representative" of current OSB operations. The Air Force ignores the fact that current operations have not been subjected to an environmental analysis, and violate the National Environmental Policy Act.

Operations that violate NEPA cannot be used as a baseline. Operations that have never had an environmental analysis cannot be used as a baseline.

The Wyle Study, which was commissioned by the Air Force and which is the predecessor of the current EA, states on page 55 that the 1978 EA is "the prevailing EA."

On page 52, the Wyle Study elaborates:

... [T]he mission, the number of operations, and the types of aircraft in Operation Snowbird have changed substantially since development of the EA in 1978. ... [T]he training has evolved from winter deployment training for the Cold War era to year-round pre-deployment training exercises. ... Other

significant changes include: none of the original aircraft in the EA are currently involved in OSB; the number of days OSB aircraft are projected to be at DM has risen from two weeks to one month or longer; the number of operations has, in some years, doubled; night time operations have been added; the limitation of flight operations to one arrival and departure with no pattern operations conducted has been inconsistently accomplished or documented since 1978; and on-base aircraft maintenance runup operations have likewise been accomplished and documented. In short, there have been significant changes in OSB's mission, training and aircraft operations since the 1978 EA! was released. [Emphasis added.]

The Wyle Study makes it clear that a 1978 baseline must be used. OSB was last analyzed in 1978, and 1978 is the only defensible baseline.

With a 1978 baseline, the current EA must analyze its proposed alternatives in light of the encroachment upon D-M of residential and commercial areas since 1978; the greater density of surrounding neighborhoods that has resulted from the construction of apartments, schools, and medical facilities since 1978; the increase in arrivals and departures, as well as the different types of aircraft, at Tucson International Airport since 1978; the change in Tucson's air quality since 1978; and many other factors.

To ensure the final decision regarding Operation Snowbird will withstand potential legal challenges, the current analysis must use the 1978 EA as its baseline. Further, a proper analysis of all operations not covered by the 1978 EA can be accomplished only with an Environmental Impact Statement.

Sincerely,

Gary A. Hunter

Resident of Midtown Tucson

From: MELINDA KINARD [mailto:mkinard2@cox.net] Sent: Wednesday, September 12, 2012 10:35 AM To: 355 FW/PA 355th FW Public Affairs Subject: operation snowbird.

the jets over central tucson are so loud now that the glass in my windows rattles when they fly over my neighborhood. lately in september 2012 all of the airplanes are flying VERY low over the neighborhoods. this is unacceptable.

davis monthan is creating a huge problem for the residents here with its insensitivity to the decibels as well as the low altitude flying. i do not support this project at all . you need to go back to the drawing board and listen to the tax-paying residents of tucson.

thank you.

From: jwatkins@math.arizona.edu [mailto:jwatkins@math.arizona.edu] Sent: Wednesday, September 12, 2012 9:02 PM To: 355 FW/PA 355th FW Public Affairs Cc: mayor1@tucsonaz.gov; ward6@tucsonaz.gov Subject: OSB EA Comment Submittal

I have attached my remarks on the Operation Snowbird Environmental Assessment. I have reviewed some standards in Guidelines for Statistical Practice of the American Statistical Association as a basis for evaluation of use of statistics in the Draft Environmental Assessment. In addition, I have included the Declaration of Professional Ethics adopted by the International Statistical Institute Council.

Joe Watkins

To: Gary D. Chesley, Colonel, USAF Deputy Director, Installations & Mission Support

From: Joseph Watkins 2726 East Malvern Street, Tucson AZ 85716 jwatkins@math.arizona.edu

Re: Draft OSB EA Comment Submittal on Operation Snowbird, Davis-Monthan Air Force Base

Date: September 12, 2012

Dear Colonel Chesley,

I have taught statistics classes for more than 15 years. At a certain point early in the semester of an introductory course, we discuss the ethical issues associated with the presentation and analysis of data. The sources of our discussion are provided by professional statistical societies, notably, the *Ethical Guidelines for Statistical Practice* from the American Statistical Society and the International Statistical Institute *Declaration on Professional Ethics*. I have enclosed a copy of these two valuable documents so that you will have ready access to them.

The Environmental Assessment for the Proposed Update and Implementation of the National Guard Bureau Training Plan 60-1 in Support of Operation Snowbird Davis-Monthan Air Force Base, Arizona has a Finding of No Significant Impact (FONSI). Because the Air Force has made a finding that is in its own interest, the report of such a finding necessitates heightened scrutiny. Let's begin with some excerpts from the Ethical Guidelines for Statistical Practice to aid us on our evaluation of the quality of the statistical work in the Environmental Assessment.

I. PREAMBLE B. Statistics and Society

Scientific and engineering research in all disciplines requires the careful design and analysis of experiments and observations. To the extent that uncertainty and measurement error are involved-as they are in most research-research design, data quality management, analysis, and interpretation are all crucially dependent on statistical concepts and methods. Even in theory, much of science and engineering involves natural variability. Variability, whether great or small, must be carefully examined for both random error and possible researcher bias or wishful thinking.

Statistical tools and methods, as with many other technologies, can be employed either for social good or evil. The professionalism encouraged by these guidelines is predicated on their use in socially responsible pursuits by morally responsible societies, governments, and employers. Where the end purpose of a statistical application is itself morally reprehensible, statistical professionalism ceases to have ethical worth.

II. ETHICAL GUIDELINES A. Professionalism

1. Strive for relevance in statistical analyses. Typically, each study should be based on a competent understanding of the subject-matter issues, statistical protocols that are clearly defined for the stage (exploratory, intermediate, or final) of analysis before looking at those data that will be decisive for that stage, and technical criteria to justify both the practical relevance of the study and the amount of data to be used.

2. Guard against the possibility that a predisposition by investigators or data providers might predetermine the analytic result. Employ data selection or sampling methods and analytic approaches that are designed to ensure valid analyses in either frequentist or Bayesian approaches.

3. Remain current in dynamically evolving statistical methodology; yesterday's preferred methods may be barely acceptable today and totally obsolete tomorrow.

C. Responsibilities in Publications and Testimony

2. Report statistical and substantive assumptions made in the study.

3. In publications or testimony, identify who is responsible for the statistical work if it would not otherwise be apparent.

5. Account for all data considered in a study and explain the sample(s) actually used.

6. Report the sources and assessed adequacy of the data.

7. Report the data cleaning and screening procedures used, including any imputation.

8. Clearly and fully report the steps taken to guard validity. Address the suitability of the analytic methods and their inherent assumptions relative to the circumstances of the specific study. Identify the computer routines used to implement the analytic methods.

12. Report the limits of statistical inference of the study and possible sources of error. For example, disclose any significant failure to follow through fully on an agreed sampling or analytic plan and explain any resulting adverse consequences.

15. Write with consideration of the intended audience. (For the general public, convey the scope, relevance, and conclusions of a study without technical distractions. For the professional literature, strive to answer the questions likely to occur to your peers.)

With these very basic rules of ethical behavior in mind, let's review just two aspects of The Environmental Assessment.

1. Choice of Baseline

The last broad agreement on airplane operations between the Davis-Monthan Air Force Base and the people who live in the vicinity of the Base was the Environmental Assessment of 1978. Thus, a credible null hypothesis is to take the *status quo* to be the circumstances in 1978. The onus falls on the on the Air Force to show that any alternative choice does not lead to a predetermination of the result of the analysis. Could the Air Force conduct an analysis using a 1978 dateline? Indeed, it states that it could, but would rather not. To quote from the report:

In order to provide a valid baseline for comparison, the Air Force would essentially be forced to rewrite the 1978 EA to be able to compare the impacts of proposed operations with type, nature, and quality of impacts occurring in 1978. The Air Force has determined that recreating a 34-year-old environmental baseline upon which to make present-day decisions would be unhelpful and not pragmatic. (page 2-2, lines 19 through 24).

The documents adds

NEPA is a forward-looking statute in which agencies are not required to catalogue or exhaustively list and analyze all individual past actions. (page 2-2, lines 10 through 12)

as an argument against using the 1978 baseline. However, no request was made to make such an exhaustive list or analysis. The request was to use a 1978 baseline. In addition, the choice of this baseline does not interfere with NEPA's charge to look forward.

It seems that the report is based on a 2009 baseline and uses information from a 2007 report. I could not find a well-explained justification for this choice of baseline. In addition, I could not even locate the 2007 report. This combination is particularly troubling. If the activities connected with Operation Snowbird are intensifying over time, then without careful explanation, the public will have a distinct impression that the choice of baseline prejudices the outcome particularly when the noise contour maps are based on 2007 data unavailable to the public.

2. Impact of Noise

The finding of no significant impact based on the public annoyance from noise exposure uses the well-cited 1978 study of Schultz. His fitted curve incorporates all forms of transportation noise data and makes no special consideration of the nature of annoyance

from military aircraft. More modern methods are provided, for example by Wyle (Noise Effects and the Affect of Aviation Noise on the Environment), who is otherwise cited in this Environmental Assessment. In this study (page 12), the authors note:

Military aircraft flying on Military Training Routes (MTRs) and in Restricted Areas/Ranges generate a noise environment that is somewhat different from that associated with airfield operations. ... To represent these differences, the conventional SEL metric is adjusted to account for the "surprise" effect of the sudden onset of aircraft noise events on humans with an adjustment ranging up to 11 dB above the normal Sound Exposure Level. (Stusnick, et al. 1992).

Thus, the analysis in the document fails to use at least one method that is more powerful in finding a significant impact from noise. This is particularly noteworthy in that the increase in flights, minimized by the report to be 7%, are those planes that have the most significant "surprise" effect. Moreover, even though the F-22 is a part of the Preferred Alternative, it is not included in the analyses.

With reference to the ethical guidelines, we note several items:

- No effort was made to demonstrate that the chosen baseline does not predetermine the finding.
- Uncertainties in measurements are never mentioned. For example, we do not see confidence intervals for the estimates.
- Statistical protocols and assumptions are routinely left unexplained. For example, the procedure to move from mishap rates to risk factors is just stated. I could not find a definition of risk factor. In addition, total risk is the accumulation of risks from many sources. The models used to combine risk are absent from the report. For example, if a classical additive model of risk is used, then the Guidelines require an explanation for the failure to use more modern methods. Here is the explanation of methods that I found in the Environmental Assessment:

The mishap rate is dependent on the number of each aircraft type deployed, the time elapsed since the aircraft type has been in operation, the number of hours flown for each type, and the location of the operations. The mishap rates for OSB at DMAFB were converted to a risk factor for each aircraft type based on the number of hours flown by each aircraft type in OSB. (Page 3-21, lines 19 through 22).

- The contour maps in Section 4 appear with no explanation for the methodology and no reference of the computer program used in determining noise contour lines.
- Alternative methods are not given. The Wyle study gives alternatives for measuring noise more modern than the 1978 Shultz study. Because this method is adversarial to the finding of no significant impact, standard practice in statistics is to explain

why such a method is considered inferior.

- The criterion for finding a significant impact is not explained and so the results cannot not be assessed independently.
- Aspects of the data are not sourced. Indeed, the 2007 study does not seem to be public.
- Uncertainties in the data are not explained risk factors, noise contour lines, and the number of affected individuals are all estimates based on assumptions that must be stated plainly and whose uncertainties need to be described carefully.
- The Air Force has an ethical obligation to make the report accessible to the public and to explain how their methods result in a valid analysis, to explain how data were summarized, and to give the criterion for decision.
- In addition, a significant portion of the public who are impacted by the activities of the Air Force Base are monolingual Spanish speakers and the Air Force has failed to make the report accessible to these residents.

In summary, the Environmental Assessment goes falls well short of the ethical standards for statistics and society and standards of professionalism as articulated in the *Ethical Guidelines for Statistical Practice*. As a consequence, I call for the withdrawal of the Environmental Assessment and for the issuing of a new report in which agreed upon ethical standards form the basis of the study.

Respectfully submitted,

Joseph Watkins

Enclosures:

Ethical Guidelines for Statistical Practice from the American Statistical Society *Declaration on Professional Ethics* from International Statistical Institute

Ethical Guidelines for Statistical Practice

American Statistical Association Prepared by the Committee on Professional Ethics Approved by the Board of Directors, August 7, 1999

Executive Summary

This document contains two parts: **I. Preamble** and **II. Ethical Guidelines.** The Preamble addresses **A. Purpose of the Guidelines**, **B. Statistics and Society**, and **C. Shared Values**. The purpose of the document is to encourage ethical and effective statistical work in morally conducive working environments. It is also intended to assist students in learning to perform statistical work responsibly. Statistics plays a vital role in many aspects of science, the economy, governance, and even entertainment. It is important that all statistical practitioners recognize their potential impact on the broader society and the attendant ethical obligations to perform their work responsibly. Furthermore, practitioners are encouraged to exercise "good professional citizenship" in order to improve the public climate for, understanding of, and respect for the use of statistics throughout its range of applications.

The **Ethical Guidelines** address eight general topic areas and specify important ethical considerations under each topic. **A. Professionalism** points out the need for competence, judgment, diligence, self-respect, and worthiness of the respect of other people. **B. Responsibilities to Funders, Clients, and Employers** discusses the practitioner's responsibility for assuring that statistical work is suitable to the needs and resources of those who are paying for it, that funders understand the capabilities and limitations of statistics in addressing their problem, and that the funder's confidential information is protected.

C. Responsibilities in Publications and Testimony addresses the need to report sufficient information to give readers, including other practitioners, a clear understanding of the intent of the work, how and by whom it was performed, and any limitations on its validity. **D. Responsibilities to Research Subjects** describes requirements for protecting the interests of human and animal subjects of research -- not only during data collection but also in the analysis,

interpretation, and publication of the resulting findings. **E. Responsibilities to Research Team Colleagues** addresses the mutual responsibilities of professionals participating in multidisciplinary research teams.

F. Responsibilities to Other Statisticians or Statistical Practitioners notes the interdependence of professionals doing similar work, whether in the same or different organizations. Basically, they must contribute to the strength of their professions overall, by sharing non-proprietary data and methods, by participating in peer review, and by respecting differing professional opinions. **G.**

Responsibilities Regarding Allegations of Misconduct addresses the sometimes painful process of investigating potential ethical violations and treating those involved with both justice and respect. Finally, **H. Responsibilities of Employers, Including Organizations, Individuals, Attorneys, or Other Clients Employing Statistical Practitioners** encourages employers and clients

to recognize the highly interdependent nature of statistical ethics and statistical validity. Employers and clients must not pressure practitioners to produce a particular "result" regardless of its statistical validity. They must avoid the potential social harm that can result from the dissemination of false or misleading statistical work.

I. PREAMBLE

A. Purpose of the Guidelines

The American Statistical Association's Ethical Guidelines for Statistical Practice are intended to help statistical practitioners make and communicate ethical decisions. Clients, employers, researchers, policy makers, journalists, and the public should be urged to expect that statistical practice will be conducted in accordance with these guidelines and to object when it is not. While learning how to apply statistical theory to problems, students should be encouraged to use these guidelines whether or not their target professional specialty will be "statistician." Employers, attorneys, and other clients of statistical practitioners have a responsibility to provide a moral environment that fosters the use of these ethical guidelines.

Application of these or any other ethical guidelines generally requires good judgment and common sense. The guidelines may be partially conflicting in specific cases. The application of these guidelines in any given case can depend on issues of law and shared values, work-group politics, the status and power of the individuals involved, and the extent to which the ethical lapses pose a threat to the public, to one's profession, or to one's organization. The individuals and institutions responsible for making such ethical decisions can receive valuable assistance by discussion and consultation with others, particularly persons with divergent interests with respect to the ethical issues under consideration.

B. Statistics and Society

The professional performance of statistical analyses is essential to many aspects of society. The use of statistics in medical diagnoses and biomedical research may affect whether individuals live or die, whether their health is protected or jeopardized, and whether medical science advances or gets sidetracked. Life, death, and health, as well as efficiency, may be at stake in statistical analyses of occupational, environmental, or transportation safety. Early detection and control of new or recurrent infectious diseases depend on sound epidemiological statistics. Mental and social health may be at stake in psychological and sociological applications of statistical analysis.

Effective functioning of the economy depends on the availability of reliable, timely, and properly interpreted economic data. The profitability of individual firms depends in part on their quality control and their market research, both of which should rely on statistical methods. Agricultural productivity benefits greatly from

statistically sound applications to research and output reporting. Governmental policy decisions regarding public health, criminal justice, social equity, education, the environment, the siting of critical facilities, and other matters depend in part on sound statistics.

Scientific and engineering research in all disciplines requires the careful design and analysis of experiments and observations. To the extent that uncertainty and measurement error are involved -- as they are in most research -- research design, data quality management, analysis, and interpretation are all crucially dependent on statistical concepts and methods. Even in theory, much of science and engineering involves natural variability. Variability, whether great or small, must be carefully examined both for random error and for possible researcher bias or wishful thinking.

Statistical tools and methods, like many other technologies, can be employed either for social good or for evil. The professionalism encouraged by these guidelines is predicated on their use in socially responsible pursuits by morally responsible societies, governments, and employers. Where the end purpose of a statistical application is itself morally reprehensible, statistical professionalism ceases to have ethical worth.

C. Shared Values

Because society depends on sound statistical practice, all practitioners of statistics, whatever their training and occupation, have social obligations to perform their work in a professional, competent, and ethical manner. This document is directed to those whose primary occupation is statistics. Still, the principles expressed here should also guide the statistical work of professionals in all other disciplines that use statistical methods. All statistical practitioners are obliged to conduct their professional activities with responsible attention to:

- 1. The social value of their work and the consequences of how well or poorly it is performed. This includes respect for the life, liberty, dignity, and property of other people.
- 2. The avoidance of any tendency to slant statistical work toward predetermined outcomes. (It is acceptable to advocate a position; it is not acceptable to misapply statistical methods in doing so.)
- 3. Statistics as a science. (As in any science, understanding evolves. Statisticians have a body of established knowledge but also many unresolved issues that deserve frank discussion.)
- 4. The maintenance and upgrading of competence in their work.
- 5. Adherence to all applicable laws and regulations, as well as applicable international covenants, while also seeking to change any of those that are ethically inappropriate.

- 6. Preservation of data archives in a manner consistent with responsible protection of the safety and confidentiality of any human beings and organizations involved.
- 7. In addition to ethical obligations, good professional citizenship encourages:
- 8. Collegiality and civility with fellow professionals.
- 9. Support for improved public understanding of and respect for statistics.
- 10. Support for sound statistical practice, especially when it is unfairly criticized.
- 11. Exposure of dishonest or incompetent uses of statistics.
- 12. Service to one's profession as a statistical editor, reviewer, or association official and service as an active participant in (formal or informal) ethical review panels.

II. ETHICAL GUIDELINES

A. Professionalism

- 1. Strive for relevance in statistical analyses. Typically, each study should be based on a competent understanding of the subject matter issues, statistical protocols that are clearly defined for the stage (exploratory, intermediate, or final) of analysis before looking at those data that will be decisive for that stage, and technical criteria to justify both the practical relevance of the study and the amount of data to be used.
- 2. Guard against the possibility that a predisposition by investigators or data providers might predetermine the analytic result. Employ data selection or sampling methods and analytic approaches that are designed to assure valid analyses in either frequentist or Bayesian approaches.
- 3. Remain current in dynamically evolving statistical methodology; yesterday's preferred methods may be barely acceptable today and totally obsolete tomorrow.
- 4. Assure that adequate statistical and subject-matter expertise are both applied to any planned study. If this criterion is not met initially, it is important to add the missing expertise before completing the study design.
- 5. Use only statistical methodologies suitable to the data and to obtaining valid results. For example, address the multiple potentially confounding factors in observational studies, and use due caution in drawing causal inferences
- 6. Do not join a research project unless you can expect to achieve valid results and unless you are confident that your name will not be associated with the project or resulting publications without your explicit consent.

- 7. The fact that a procedure is automated does not ensure its correctness or appropriateness; it is also necessary to understand the theory, the data, and the methods used in each statistical study. This goal is served best when a competent statistical practitioner is included early in the research design, preferably in the planning stage.
- 8. Recognize that any frequentist statistical test has a random chance of indicating significance when it is not really present. Running multiple tests on the same data set at the same stage of an analysis increases the chance of obtaining at least one invalid result. Selecting the one "significant" result from a multiplicity of parallel tests poses a grave risk of an incorrect conclusion. Failure to disclose the full extent of tests and their results in such a case would be highly misleading.
- 9. Respect and acknowledge the contributions and the intellectual property of others.
- 10. Disclose conflicts of interest, financial and otherwise, and resolve them. This may sometimes require divestiture of the conflicting personal interest or recusal or withdrawal from the professional activity. Examples where conflict of interest may be problematic include grant reviews, other peer reviews, and tensions between scholarship and personal or family financial interests.
- 11.Provide only such expert testimony as you would be willing to have peer reviewed.

B. Responsibilities to Funders, Clients, and Employers

- 1. Where appropriate, present a client or employer with choices among valid alternative statistical approaches that may vary in scope, cost, or precision.
- 2. Clearly state your statistical qualifications and experience relevant to your work.
- 3. Clarify the respective roles of different participants in studies to be undertaken.
- 4. Explain any expected adverse consequences of failure to follow through on an agreed-upon sampling or analytic plan.
- 5. Apply statistical sampling and analysis procedures scientifically, without predetermining the outcome.
- 6. Make new statistical knowledge widely available, in order to provide benefits to society at large beyond your own scope of applications. Statistical methods may be broadly applicable to many classes of problem or application. (Statistical innovators may well be entitled to monetary or other rewards for their writings, software, or research results.)
- 7. Guard privileged information of the employer, client, or funder.

- 8. Fulfill all commitments.
- 9. Accept full responsibility for your professional performance.

C. Responsibilities in Publications and Testimony

- Maintain personal responsibility for all work bearing your name; avoid undertaking work or coauthoring publications for which you would not want to acknowledge responsibility. Conversely, accept (or insist upon) appropriate authorship or acknowledgment for professional statistical contributions to research and the resulting publications or testimony.
- 2. Report statistical and substantive assumptions made in the study.
- 3. In publications or testimony, identify who is responsible for the statistical work if it would not otherwise be apparent.
- 4. Make clear the basis for authorship order, if determined on grounds other than intellectual contribution. Preferably, authorship order in statistical publications should be by degree of intellectual contribution to the study and to the material to be published, to the extent that such ordering can feasibly be determined. When some other rule of authorship order is used in a statistical publication, the rule used should be disclosed in a footnote or endnote. (Where authorship order by contribution is assumed by those making decisions about hiring, promotion, or tenure, for example, failure to disclose an alternative rule may improperly damage or advance careers.)
- 5. Account for all data considered in a study and explain the sample(s) actually used.
- 6. Report the sources and assessed adequacy of the data.
- 7. Report the data cleaning and screening procedures used, including any imputation.
- 8. Clearly and fully report the steps taken to guard validity. Address the suitability of the analytic methods and their inherent assumptions relative to the circumstances of the specific study. Identify the computer routines used to implement the analytic methods.
- 9. Where appropriate, address potential confounding variables not included in the study.
- 10. In publications or testimony, identify the ultimate financial sponsor of the study, the stated purpose, and the intended use of the study results.
- 11. When reporting analyses of volunteer data or other data not representative of a defined population, include appropriate disclaimers.

- 12. Report the limits of statistical inference of the study and possible sources of error. For example, disclose any significant failure to follow through fully on an agreed sampling or analytic plan and explain any resulting adverse consequences.
- 13. Share data used in published studies to aid peer review and replication, but exercise due caution to protect proprietary and confidential data, including all data which might inappropriately reveal respondent identities.
- 14.As appropriate, promptly and publicly correct any errors discovered after publication.
- 15.Write with consideration of the intended audience. (For the general public, convey the scope, relevance, and conclusions of a study without technical distractions. For the professional literature, strive to answer the questions likely to occur to your peers.)

D. Responsibilities to Research Subjects (including census or survey respondents and persons and organizations supplying data from administrative records, as well as subjects of physically or psychologically invasive research)

- Know about and adhere to appropriate rules for the protection of human subjects, including particularly vulnerable or other special populations who may be subject to special risks or who may not be fully able to protect their own interests. Assure adequate planning to support the practical value of the research, the validity of expected results, the ability to provide the protection promised, and consideration of all other ethical issues involved.
- 2. Avoid the use of excessive or inadequate numbers of research subjects by making informed recommendations for study size. These recommendations may be based on prospective power analysis, the planned precision of the study endpoint(s), or other methods to assure appropriate scope to either frequentist or Bayesian approaches. Study scope should also take into consideration the feasibility of obtaining research subjects and the value of the data elements to be collected.
- 3. Avoid excessive risk to research subjects and excessive imposition on their time and privacy.
- 4. Protect the privacy and confidentiality of research subjects and data concerning them, whether obtained directly from the subjects, from other persons, or from administrative records. Anticipate secondary and indirect uses of the data when obtaining approvals from research subjects; obtain approvals appropriate for peer review and for independent replication of analyses.
- 5. Be aware of legal limitations on privacy and confidentiality assurances. Do not, for example, imply protection of privacy and confidentiality from legal processes of discovery unless explicitly authorized to do so.

- 6. Before participating in a study involving human beings or organizations, analyzing data from such a study, or accepting resulting manuscripts for review, consider whether appropriate research subject approvals were obtained. (This safeguard will lower your risk of learning only after the fact that you have collaborated on an unethical study.) Consider also what assurances of privacy and confidentiality were given and abide by those assurances.
- 7. Avoid or minimize the use of deception. Where it is necessary and provides significant knowledge, as in some psychological, sociological, and other research, assure prior independent ethical review of the protocol and continued monitoring of the research.
- 8. Where full disclosure of study parameters to subjects or to other investigators is not advisable, as in some randomized clinical trials, generally inform them of the nature of the information withheld and the reason for withholding it. As with deception, assure independent ethical review of the protocol and continued monitoring of the research.
- 9. Know about and adhere to appropriate animal welfare guidelines in research involving animals. Assure that a competent understanding of the subject matter is combined with credible statistical validity.

E. Responsibilities to Research Team Colleagues

- 1. Inform colleagues from other disciplines about relevant aspects of statistical ethics.
- 2. Promote effective and efficient use of statistics by the research team.
- 3. Respect the ethical obligations of members of other disciplines as well as your own.
- 4. Assure professional-quality reporting of the statistical design and analysis.
- 5. Avoid compromising statistical validity for expediency, but use reasonable approximations as appropriate.

F. Responsibilities to Other Statisticians or Statistical Practitioners

- 1. Promote sharing of (nonproprietary) data and methods. As appropriate, make suitably documented data available for replicate analyses, metadata studies, and other suitable research by qualified investigators.
- 2. Be willing to help strengthen the work of others through appropriate peer review. When doing so, complete the review promptly and well.
- 3. Assess methods, not individuals.

- 4. Respect differences of opinion.
- 5. Instill in students a positive appreciation for the practical value of the concepts and methods they are learning.
- 6. Use professional qualifications and the contributions of the individual as an important basis for decisions regarding statistical practitioners' hiring, firing, promotion, work assignments, publications and presentations, candidacy for offices and awards, funding or approval of research, and other professional matters. Avoid as best you can harassment of or discrimination against statistical practitioners (or anyone else) on professionally irrelevant bases such as *race, color, ethnicity, sex, sexual orientation, national origin, age, religion, nationality, or disability.*

G. Responsibilities Regarding Allegations of Misconduct

- 1. Avoid condoning or appearing to condone careless, incompetent, or unethical practices in statistical studies conducted in your working environment or elsewhere.
- 2. Deplore all types of professional misconduct, not just plagiarism and data fabrication or falsification. Misconduct more broadly includes all professional dishonesty, by commission or omission, and, within the realm of professional activities and expression, all harmful disrespect for people, unauthorized use of their intellectual and physical property, and unjustified detraction from their reputations.
- 3. Recognize that differences of opinion and honest error do not constitute misconduct; they warrant discussion but not accusation. Questionable scientific practices may or may not constitute misconduct, depending on their nature and the definition of misconduct used.
- 4. If involved in a misconduct investigation, know and follow prescribed procedures. Maintain confidentiality during an investigation, but disclose the results honestly after the investigation has been completed.
- 5. Following a misconduct investigation, support the appropriate efforts of the accused, the witnesses, and those reporting the possible scientific error or misconduct to resume their careers in as normal a manner as possible.
- 6. Do not condone retaliation against or damage to the employability of those who responsibly call attention to possible scientific error or misconduct.

H. Responsibilities of Employers, Including Organizations, Individuals, Attorneys, or Other Clients Employing Statistical Practitioners

- Recognize that the results of valid statistical studies cannot be guaranteed to conform to the expectations or desires of those commissioning the study or the statistical practitioner(s). Any measures taken to assure a particular outcome will lessen the validity of the analysis.
- 2. Valid findings result from competent work in a moral environment. Pressure on a statistical practitioner to deviate from these guidelines is likely to damage both the validity of study results and the professional credibility of the practitioner.
- 3. Make new statistical knowledge widely available in order to benefit society at large. (Those who have funded the development of new statistical innovations are entitled to monetary and other rewards for their resulting products, software, or research results.)
- 4. Support sound statistical analysis and expose incompetent or corrupt statistical practice. In cases of conflict, statistical practitioners and those employing them are encouraged to resolve issues of ethical practice privately. If private resolution is not possible, recognize that statistical practitioners have an ethical obligation to expose incompetent or corrupt practice before it can cause harm to research subjects or society at large.
- 5. Recognize that within organizations and within professions using statistical methods generally, statistical practitioners with greater prestige, power, or status have a responsibility to protect the professional freedom and responsibility of more subordinate statistical practitioners to comply with these guidelines.
- 6. Do not include statistical practitioners in authorship or acknowledge their contributions to projects or publications without their explicit permission.

Key References:

1. American Statistical Association. Discussions of the statistics profession and information about the organization are available on the Association's home Web site: http://www.amstat.org

2. These ethical guidelines, case studies in statistical ethics, and other related resources and links can be found at the Ethics and Statistics Web site:

3. U.S. Federal regulations regarding human subjects protection are contained in Title 45 of the Code of Federal Regulations, Chapter 46 (45 CFR 46), accessible at: http://www.access.gpo.gov/cgi-bin/cfrassemble.cgi?title=199845, using the search term "46."

4. *The Belmont Report: Ethical Principles and Guidelines for the Protection of Human Subjects of Research* is available through the Office for the Protection from Research Risks at: http://grants.nih.gov/grants/oprr/humansubjects/guidance/belmont.htm

5. Title 13, U.S. Code, Chapter 5 - Censuses, Subchapter II - Population, housing, and unemployment, Sec. 141 restricts uses of U.S. population census information. Similar restrictions may apply in other countries.

6. The International Statistical Institute's 1985 *Declaration on Professional Ethics* is available at: http://www.cbs.nl/isi/ethics.htm

7. The United Nations Statistical Commission's 1994 *Fundamental Principles of Official Statistics* is available at: http://unstats.un.org/unsd/goodprac/bpabout.asp

Members of the American Statistical Association (ASA) Committee on Professional Ethics (1998-99): John Bailar, Paula Diehr, Susan Ellenberg, John Gardenier (Chair), Lilliam Kingsbury, David Levy, Lisa McShane, Richard Potthoff, Jerome Sacks, Juliet Shaffer, and Chamont Wang.

Other contributing advisors in the preparation of these guidelines: Martin David, Virginia deWolf, Mark Frankel (American Association for the Advancement of Science), Joseph Kadane, Mary Grace Kovar, Michael O'Fallon, Fritz Scheuren, and William Seltzer.

Helpful reviews of these guidelines were provided by the Council of Sections, Beth Dawson, Chair, and by the Council of Chapters, Brenda Cox, Chair.

Thanks to many persons who commented on successive drafts or participated in discussions of the Guidelines at the 1998 Joint Statistical Meetings, Dallas, Texas. We also thank the various ASA Boards and the ASA Presidents who have supported this effort, especially Lynne Billard, Jon Kettenring, David Moore, and Jonas Ellenberg, as well as ASA Executive Director, Ray Waller.

732 North Washington Street · Alexandria, VA 22314-1943 · Phone: (703) 684-1221 Toll-free: (888) 231-3473 · Fax: (703) 684-2037 · Email: asainfo@amstat.org

Copyright | Privacy Statement | Disclaimer | Link to Us | Staff Directory

© 2008 American Statistical Association. All Rights Reserved. Upgrading to the latest version of your browser software may enhance your online experience.



DECLARATION ON PROFESSIONAL ETHICS

ADOPTED BY THE ISI COUNCIL 22 & 23 July 2010 Reykjavik, Iceland

International Statistical Institute - Permanent Office P.O. Box 24070 2490 AB The Hague The Netherlands http://isi-web.org/about/ethics-intro

ISI Declaration on Professional Ethics

PREAMBLE, VALUES, PRINCIPLES AND BACKGROUND

<u>Page</u>

For more background information and bibliographical details (English only), please visit the ISI website http://isi-web.org/about/ethics-intro

PREAMBLE

The ISI's Declaration on Professional Ethics consists of a statement of Shared Professional Values and a set of Ethical Principles that derive from these values.

For the purposes of this document, the definition of who is a statistician goes well beyond those with formal degrees in the field, to include a wide array of creators and users of statistical data and tools. Statisticians work within a variety of economic, cultural, legal and political settings, each of which influences the emphasis and focus of statistical inquiry. They also work within one of several different branches of their discipline, each involving its own techniques and procedures and, possibly, its own ethical approach.

Statisticians work in diverse fields such as economics, psychology, sociology, medicine, whose practitioners have ethical conventions that may influence their conduct. Even within the same setting and branch of statistics, individuals may face various situations and constraints in which ethical questions arise.

The aim of this declaration is to enable the statistician's individual ethical judgments and decisions to be informed by shared values and experience, rather than by rigid rules imposed by the profession. The declaration seeks to document widely held principles of the statistics profession and to identify the factors that obstruct their implementation. It recognizes that, the operation of one principle may impede the operation of another, that statisticians – in common with other occupational groups – have competing obligations not all of which can be fulfilled simultaneously. Thus, statisticians will sometimes have to make choices between principles. The declaration does not attempt to resolve these choices or to establish priorities among the principles. Instead it offers a framework within which the conscientious statistician should be able to work comfortably. It is urged that departures from the framework of principles be the result of deliberation rather than of ignorance.

The declaration's first intention is to be informative and descriptive rather than authoritarian or prescriptive. Second, it is designed to be applicable as far as possible to the wide and changing areas of statistical methodology and application. For this reason, its provisions are drawn quite broadly. Third, although the principles are framed so as to have wider application to decisions than to the issues it specifically mentions, the declaration is by no means exhaustive. It is designed in the knowledge that it will require periodic updating and amendment, reflecting on the one hand developments in the generation of information and technical tools utilized by statistical outputs. Fourth, the values, principles, and the commentaries which follow acknowledge with the general written or unwritten rules or norms, such as compliance with the law or the need for probity. However, the declaration restricts itself insofar as possible to matters of specific concern to statistical inquiry.

Although not explicitly stated, the Principles inherently reflect the obligations and responsibilities of – as well as the resulting conflicts faced by – statisticians to forces and pressures outside of their own performance, namely to and from:

- Society
- Employers, Clients, and Funders
- Colleagues
- Subjects

In carrying out his/her responsibilities, each statistician must be sensitive to the need to ensure that his/her actions are, first, consistent with the best interests of each group and, second, do not favor any group at the expense of any other, or conflict with any of the Principles.

The Principles are followed by short commentaries on the conflicts and difficulties inherent in their application. A link is provided for each ethical principle for those who wish to pursue the issues. Similarly, a limited annotated bibliography is provided after the commentaries for those who wish to pursue the issues or consult more detailed texts.

SHARED PROFESSIONAL VALUES

Our shared professional values are respect, professionalism, truthfulness and integrity.

1. Respect

We respect the privacy of others and the promises of confidentiality given to them. We respect the communities where data is collected and guard against harm coming to them by misuse of the results.

We should not suppress or improperly detract from the work of others.

2. Professionalism

The value Professionalism implies Responsibility, Competence and Expert Knowledge, and Informed Judgment.

We work to understand our users' needs.

We use our statistical knowledge, data, and analyses for the Common Good to serve the society.

We strive to collect and analyze data of the highest quality possible.

We are responsible for the fitness of data and of methods for the purpose at hand. We discuss issues objectively and strive to contribute to the resolution of problems. We obey the law and work to change laws we believe impede good statistical practice.

We are continuously learning both about our own field as well as those to which we apply our methods.

We develop new methods as appropriate.

We do not take assignments in which we have a clear conflict of interest. We act responsibly with our employers.

3. Truthfulness and Integrity

By Truthfulness and Integrity, we mean Independence, Objectivity and Transparency.

We produce statistical results using our science and are not influenced by pressure from politicians or funders.

We are transparent about the statistical methodologies used and make these methodologies public.

We strive to produce results that reflect the observed phenomena in an impartial manner.

We present data and analyses honestly and openly.

We are accountable for our actions.

We have respect for intellectual property.

As scientists, we pursue promising new ideas and discard those demonstrated to be invalid.

We work towards the logical coherence and empirical adequacy of our data and conclusions.

We value well-established objective criteria of assessment.

ETHICAL PRINCIPLES

1. Pursuing Objectivity

Statisticians should pursue objectivity without fear or favor, only selecting and using methods designed to produce the most accurate results. They should present all findings openly, completely, and in a transparent manner regardless of the outcomes. Statisticians should be particularly sensitive to the need to present findings when they challenge a preferred outcome. The statistician should guard against predictable misinterpretation or misuse. If such misinterpretation or misuse occurs, steps should be taken to inform potential users. Findings should be communicated for the benefit of the widest possible community, yet attempt to ensure no harm to any population group.

2. Clarifying Obligations and Roles

The respective obligations of employer, client, or funder and statistician in regard to their roles and responsibility that might raise ethical issues should be spelled out and fully understood. In providing advice or guidance, statisticians should take care to stay within their area of competence, and seek advice, as appropriate, from others with the relevant expertise.

3. Assessing Alternatives Impartially

Available methods and procedures should be considered and an impartial assessment provided to the employer, client, or funder of the respective merits and limitations of alternatives, along with the proposed method.

4. Conflicting Interests

Statisticians avoid assignments where they have a financial or personal conflict of interest in the outcome of the work. The likely consequences of collecting and disseminating various types of data and the results of their analysis should be considered and explored.

5. Avoiding Preempted Outcomes

Any attempt to establish a predetermined outcome from a proposed statistical inquiry should be rejected, as should contractual conditions contingent upon such a requirement.

6. Guarding Privileged Information

Privileged information is to be kept confidential. This prohibition is not to be extended to statistical methods and procedures utilized to conduct the inquiry or produce published data.

7. Exhibiting Professional Competence

Statisticians shall seek to upgrade their professional knowledge and skills, and shall maintain awareness of technological developments, procedures, and standards which are relevant to their field, and shall encourage others to do the same.

8. Maintaining Confidence in Statistics

In order to promote and preserve the confidence of the public, statisticians should ensure that they accurately and correctly describe their results, including the explanatory power of their data. It is incumbent upon statisticians to alert potential users of the results to the limits of their reliability and applicability.

9. Exposing and Reviewing Methods and Findings

Adequate information should be provided to the public to permit the methods, procedures, techniques, and findings to be assessed independently.

10. Communicating Ethical Principles

In collaborating with colleagues and others in the same or other disciplines, it is necessary and important to ensure that the ethical principles of all participants are clear, understood, respected, and reflected in the undertaking.

11.Bearing Responsibility for the Integrity of the Discipline

Statisticians are subject to the general moral rules of scientific and scholarly conduct: they should not deceive or knowingly misrepresent or attempt to prevent reporting of misconduct or obstruct the scientific/scholarly research of others.

12.Protecting the Interests of Subjects

Statisticians are obligated to protect subjects, individually and collectively, insofar as possible, against potentially harmful effects of participating. This responsibility is not absolved by consent or by the legal requirement to participate. The intrusive potential of some forms of statistical inquiry requires that they be undertaken only with great care, full justification of need, and notification of those involved. These inquiries should be based, as far as practicable, on the subjects' freely given, informed consent. The identities and records of all subjects or respondents should be kept confidential. Appropriate measures should be utilized to prevent data from being released in a form that would allow a subject's or respondent's identity to be disclosed or inferred.

BACKGROUND NOTE

The involvement of the International Statistical Institute in establishing a declaration on professional ethics has extended over the past quarter century. The Bureau of the Institute, in response to representations by members and a proposal by the Institute's Committee on Future Directions, initially established a Committee on a Code of Ethics for Statisticians in 1979, during the 42nd ISI Session in Manila. That Committee^[11] prepared a 'code' that was accepted by the Institute during its Centenary Celebration in 1985, with the adoption of the following resolution by the General Assembly of the ISI on 21 August, 1985:

- recognizing that the aim of the Declaration on Professional Ethics for Statisticians is to document shared professional values and experience as a means of providing guidance rather than regulation;
- adopts the Declaration as an affirmation of the membership's concern with these
 matters and of its resolve to promote knowledge and interest in professional ethics
 among statisticians worldwide;
- determines to send the Declaration to all members of the ISI and its Sections and to disseminate it, as appropriate, within the statistical profession;
- commends the Committee responsible for developing the Declaration for its thorough, efficient and successful work during the last five years.

With the passage of time, the Institute found itself visiting the question of the need for an updating of the Declaration. In July 2006, the Executive Committee specifically invited its standing Professional Ethics Committee^[2] to revisit the ISI Declaration and, "should the occasion arise, (propose) updates to the ISI Declaration". This the Committee has now done. A revised document, prepared for a meeting held in Paris, in March 2007, and hosted by INSEE, was followed by an open meeting at the ISI international meetings in Lisbon, in August 2007, at which the results of all these efforts were presented to the participants for their comments and reactions. Although agreement was evident on many points, a number of suggestions for further examination were proposed, which are reflected in the addition of a Section on Shared Professional Values and a reordering and combining of several of the Ethical Principles that derive from these Values. This document is the result of these recent efforts.

In accordance with the spirit and letter of the original resolution, the International Statistical Institute presents this revised and updated Declaration on Professional Ethics, with the continued hope and belief that the new document will assist colleagues throughout the world in the pursuit of their professional goals and responsibilities.

^[1] The Committee was chaired by Roger Jowell. Original members were W. Edwards Deming, Arno Donda, Helmut V. Muhsam and Edmund Rapaport, who subsequently were joined by Edmundo Berumen-Torres, Gilbert Motsemme and René Padieu.

^[2] The current Committee is composed of David Morganstein (Chair), Margo Anderson, Edmundo Berumen, Stephen E. Fienberg, Fred Ho, Roger Jowell, Denise Lievesley, Olav Ljones, Bill Seltzer, and Jan Robert Suesser. The Committee receives important support from an Ethics Advisory Group consisting of Jean-Louis Bodin, Oliver J.M. Chinganya, Howard Gabriels, Dan Levine, René Padieu, Hrachya Petrosyan, and Norbert Victor. From: gary hunter [mailto:garyahunter@gmail.com] Sent: Thursday, September 13, 2012 7:59 PM To: 355 FW/PA 355th FW Public Affairs Subject: ATTN: OSB EA Comment Submittal

Blenman-Elm Neighborhood Association

P.O. Box 42092

Tucson AZ 85733

September 13, 2012

ATTN: OSB EA Comment Submittal

355th Fighter Wing Public Affairs

3180 South First Street

Davis-Monthan AFB, AZ 85707

Sirs:

Enclosed is a resolution that was passed by the Board of Directors of the Blenman-Elm Neighborhood Association, in Tucson.

Please ensure the resolution is carefully considered by the U.S. Air Force, and is included in the Operation Snowbird Environmental Assessment.

Sincerely,

Linda Phelan

Secretary, Board of Directors

Blenman-Elm Neighborhood Association

RESOLUTION

Operation Snowbird Environmental Assessment

The Board of Directors of the Blenman-Elm Neighborhood Association, which represents 1,700 households in Tucson's midtown, believes a full Environmental Impact Statement is necessary to properly assess the effects of an expanded Operation Snowbird.

The draft Environmental Assessment for Operation Snowbird does not justify a Finding of No Significant Impact. The EA is flawed and incomplete.

The EA's noise analysis fails to include the noisiest of OSB's aircraft: the F-18, the F-22, and the Harrier. Instead, the analysis considers only quieter aircraft, which it erroneously states are "representative."

The EA uses DNL averages to conclude that the noise of OSB aircraft will not significantly affect Tucson's residents. The EA ignores the impacts of peak noise levels; this is contrary to the recommendations of the Department of Defense. (See, for example, DoD's publications, Using Supplemental Noise Metrics and Analysis Tools (2009) and Operational Noise Manual (2005).)

The noise analysis is based on a 2007 study, which the public has not been permitted to see. This violates federal regulations, which state that the study must be "reasonably available for inspection by potentially interested persons within the time allowed for comment."

The EA focuses only on residents who live within the Davis-Monthan noise contours. It does not analyze the noise and safety impacts on midtown neighborhoods such as ours.

We are especially concerned that the EA fails to analyze the sound exposure levels of flights made between 10:00 PM and 7:00 AM, and it fails to analyze the effects of the nighttime SELs on residents.

The EA's safety analysis is incomplete. It fails to consider the safety of the F-18, F-22, and Harrier, which have the worst safety records of all the domestic fighter craft that OSB uses. Further, of all the foreign aircraft that OSB will bring to Tucson, the EA analyzes the safety only of the Tornado. For those of us who live beneath the flight paths of OSB aircraft that will carry live armaments at least part of the time, this is a great concern.

Increased aircraft noise will adversely affect Tucson's tourism industry, which generates more than \$2 billion annually in direct spending and 21,500 direct jobs. The EA states that it would be difficult to quantify the effects of the noise on tourism, so it simply ignores the problem.

The increased noise will affect property values. The EA ignores this.

At least four schools and the University of Arizona lie directly beneath OSB flight paths. Many studies have shown that aircraft noise adversely affects students' performance. The EA fails to consider this.

For these reasons, the Board of Directors of the Blenman-Elm Neighborhood Association believes the Air Force can make an informed decision only by completing a full Environmental Impact Statement.

From: Sherry DeClercq [mailto:the4packrolls@hotmail.com] Sent: Thursday, September 13, 2012 2:09 PM To: 355 FW/PA 355th FW Public Affairs Subject: I object to your Operation Snowbird Program

Myself and many of my neighbors are very concerned already about the number of loud planes flying in our neighborhood. I've spoken with many people on this issue and we can't understand why you can't fly over the desert and not over populated areas ????

Sincerely,

Sherry & Johan DeClercq 2714 E. Drachman St. Tucson, AZ. 85716

The Air Force intends to expand its Operation Snowbird (OSB) program, which flies aircraft over a portion of the Blenman Elm neighborhood. To support this expansion, the Air Force recently released its draft Environmental Assessment (EA), which considers the impacts of the expanded OSB. We have been invited to comment on the EA. We must submit our comments within a few days; the deadline is September 14.

The EA proposes to double the allowable number of OSB flights, from 1,190 to 2,256 per year. (Already, the actual number of OSB flights substantially exceeds the allowable amount.) The EA also proposes to fly some of its aircraft between 10:00 PM and 7:00 AM. This will affect those of us who have difficulty sleeping in noisy environments.

Most OSB aircraft are noisier than the A-10, which is the fighter currently based at D-M.

You may remember that February day in 2010, when three F-18s flew over Tucson. Their noise rattled midtown homes, set off car alarms, and made front-page headlines in the next day's Star. Those F-18s are among the aircraft that OSB will bring to Tucson. OSB will also fly the F-22 over our neighborhood; the F-22 is even louder than the F-18.

In addition, OSB will increase the number of foreign pilots and foreign aircraft that fly over Tucson. The foreign aircraft will include Tornados, Mirages, Kfirs, and Rafales.

The Air Force intends to issue a Finding of No Significant Impact (FONSI). The FONSI will state that the expanded OSB will not significantly affect Tucson.

If you do not agree, let the Air Force know your concerns.
From: Rita Gibbs [mailto:realtor rita@cox.net] Sent: Thursday, September 13, 2012 11:31 AM To: 355 FW/PA 355th FW Public Affairs Subject: ATTN: OSB EA COMMENT SUBMITTAL

355th Fighter Wing Public Affairs 3180 S. First Street Davis-Monthan AFB, AZ 85707

Dear DM,

I was just made aware that an Environmental Assessment report has been released by DM that concludes that there will be no impact to our neighborhood or community if OSB flights are doubled and louder planes are allowed to fly over Tucson.

The draft EA calls for expanding Operation Snowbird (OSB), based at Davis-Monthan, from 1,190 to 2,256 flights a year. It would include: A-10s, F-15s, F-16s, F-18s, Harriers, F-18 E/Fs and F-22s. Foreign aircraft participating include: Tornados, Mirages, Kfirs, and Rafales. Night training flights between 10:00 p.m. and 7: a.m. would be included.

I live in the Broadmoor neighborhood, which lies almost directly under the typical flightpath of approaching jets. I work from a home office, and the A-10 noise is a constant disturbance. The thought that the planes could DOUBLE and include even NOISIER planes is very distressing to me. Also possibly NIGHT FLIGHTS? This would destroy the peaceful use of my home and my property values in my neighborhood.

I respectfully request that DM prepare an EA that more accurately states the issues and impact.

Sincerely, Rita Gibbs, Realtor 2642 E Exeter St. Tucson, AZ 85716 520-241-6563 From: Donald Pitt [mailto:donpitt2@cox.net] Sent: Thursday, September 13, 2012 11:09 PM To: 355 FW/PA 355th FW Public Affairs Subject: Comments on OSB EA Draft

September 13, 2012

355th Fighter Wing Public Affairs Office Attn: ACC/A7P 3180 S. First Street Davis-Monthan AFB, AZ 85707

Re: OSB EA Comment Submittal

Gentlemen:

This letter relates to the draft Environmental Assessment for Operation Snowbird (OSB EA) operations out of Davis-Monthan AFB.

The draft conclusion is subjective and flawed because among other reasons (1) it uses an inappropriate baseline year, (2) it fails to present sufficient and complete data to analyze and corroborate the safety issue particularly as armed aircraft will be taking off and landing over heavily populated areas while being flown by pilots, including non USA pilots, who are engaged in training missions, (3) it fails to present sufficient and complete details about the noise issue particularly as it lacks adequate detail related to altitude levels and power levels of all aircraft flown and to be flown our of DM, all of which information is critical to analyzing the noise impact on the areas of take off and landing and areas over which the flights occur (4) it fails to analyze and discuss both the positive and negative economic impacts on the Tucson community taking into account among other matters, employment, impact on tourism, property values and (5) it fails to an!

alyze and review potential health impacts resulting from the noise created by the type of aircraft, the number of daily flights and the hours these flights occur.

Notwithstanding your agreement or disagreement with the five reasons stated above, the most important reason that a full and complete current environmental assessment needs to be undertaken and made available to the entire community is both proponents and opponents of the OSB EA draft will upon completion of a full EIS have real facts that will give credibility to whatever decision is set forth in a thorough analysis of the issues upon which rational, legitimate findings can be made, even though such findings will not embraced by everyone. The draft now furnished for comment lacks credibility and thus is divisive to a community of almost one million people who have a major aircraft base operating in the middle of the community.

Hopefully, DM can continue to operate for many more years in a manner that is reasonably acceptable to the vast majority of our community. At the moment that is not the situation and the community's noise, safety, health and economics fears and concerns have been exacerbated by releasing a draft which is incomplete and as such is deemed biased because of the lack of real facts upon conclusions are reached.

Therefore for both the substantive reasons outlined above and set forth in the other technical comments filed with you by residents of Tucson, it is imperative that a full, unbiased Environmental Impact Study be made on the proposed expansion of Operation SnowBird.

Respectfully submitted,

Donald Pitt 310 S Williams Blvd. Suite 180 Tucson, Arizona 85711 (520) 790-9900 From: Cheryl Purvis [mailto:cheryl.s.purvis@gmail.com] Sent: Thursday, September 13, 2012 6:13 PM To: 355 FW/PA 355th FW Public Affairs Subject: ATTN: OSB EA COMMENT SUBMITTAL

The Draft EA illustrates clearly why institutions should not be allowed to evaluate themselves. It concludes that doubling the number of training flights over populated areas which include schools, homes and hospitals would have no impact. This is an amazing conclusion which clearly requires significant further public scrutiny and evaluation.

The draft EA leaves out the noisiest of aircraft types. It does not provide complete safety data and the analysis used for developing the noise contours is missing. It notes that under the current situation, a disproportionate number of low income and minority people are seriously affected by noise created by the daily sorties, and concludes that the solution is to add more sorties! This would be hilarious if it wasn't tragically daft.

Under the draft EA, sorties would be allowed at night. IClearly those staying in the hospitals and living in the homes below would be affected.

Despite the lacunae listed above and more, and despite requests for public meetings on the draft EA, none have been held. Moreover, the last last environment analysis of OSB was held in 1978. In the 1970s when OSB began, the plan called for training being held between January and April, for ca. 20 sorties per day, no night or weekend flying and no significant increase in air traffic. At this point there are ca. 2000 sorties/day, and I can personally attest that they are flown before 6 a.m., after 10 p.m. and on weekends on a regular basis.

It is time to subject the Air Force's plans and activities to a thorough and public scrutiny. Aside from the numerous failures to provide required data under various regulations and executive orders, the larger question exists of public accountability. The military exists to protect the citizenry and has a responsibility of nonharming to that citizenry. The Air Force needs to take that responsibility seriously. No amount of airmen doing charity work will make up for a military base which imposes its own plans and priorities upon the community it should protect. From: sara van slyke [mailto:saravanslyke@gmail.com] Sent: Thursday, September 13, 2012 10:04 PM To: 355 FW/PA 355th FW Public Affairs Subject: OSB EA Comment Submittal

Version:1.0 StartHTML:0000000167 EndHTML:0000003129 StartFragment:0000000487 EndFragment:0000003113

To whom it may concern, September 13, 2012

I have been Director of Desert Spring Children's Center for 25 years and a member of the Tucson Early Childhood community. As educators, we agree that jet noise over our children on a daily basis is harmful to their development. Unfortunately, my preschool and numerous schools are directly under the Operation Snowbird flight pattern. When the jets fly overhead children are disoriented, scared and cry. High decibel flyovers pose a severe risk to the children who live and learn everyday in our midtown schools and neighborhoods. There brains are being negatively affected. For children, increased stress levels (as caused by loud noises and feelings of fear) bathe the brain in stress hormones. If the brains is exposed too much by this chemical, it's functions are reduced, slowed, or stopped altogether. From the ages of 0-7 the child is growing 70% of their brain. Jet noise puts these developing brains at risk.

The EA misleads the public with it's technical jargon and the subjective opinions are not backed up with verifiable data. There have been no public meetings since last September and the data has been changed since those meetings. The EA fails to investigate reasonable alternatives for basing the Operations Snowbird program somewhere else instead of flying over children. An EIS is needed to thoroughly investigate other possible locations.

It is important that the community and DM work together to define a future role that is compatible with the the flight pattern flying constantly over thousands of children everyday. The constant noise over their heads is unjust and an environmental hazard.

Tucsonians want to raise their children in a healthy environment-without damaging noise pollution. The process needs to honor the daily lives of children and their health and safety.

Sincerely,

Sara Van Slyke

September 13, 2012

saravanslyke@gmail.com 707 E. 1st St. Tucson AZ 85719

From: Bever, Thomas G - (tgb) [mailto:tgb@email.arizona.edu] Sent: Friday, September 14, 2012 12:13 PM To: 355 FW/PA 355th FW Public Affairs Subject: Health and cognitive reasons require a full EIS for DM's Snowbird operation today and in the future

There are many objections to the currently proposed EA for DM's snowbird program. Other people and organisations have reviewed the administrative and factual issues that demonstrate the need for a full EIS.

I concentrate here on the impact on health and cognitive ability of citizens exposed to the snowbird program now, and the prospect that it will double in the future, including more night time flights.

There is a growing body of scientific evidence that living in the neighbourhood of a major airport has a negative impact on health: in particular, a German study that controlled for sociological factors shows that there is increased risk for heart attacks, strokes and other diseases. Children show increases in ambient blood pressure to clinical levels.

There are corresponding effects on learning ability: in particular children show more reading difficulties and difficulty learning specific subjects.

These problems are obliquely mentioned in the draft EA, but essentially dismissed on the grounds that the noise levels will not be substantially increased if the snowbird program doubles.

This conclusion is in conflict with the way that the armed forces assess noise in their installations to protect service people. Like OSHA, the NIOSH standards take accumulated noise at a given db level as the relevant measure, rather than a weighted 24 hour average. This more realistically assesses the risk of actual hearing damage as well as the effects of punctate noise on health and cognition. Those standards demonstrate that the present and anticipated peak noise levels would exceed standards set by the military. This is true even with the choice of planes to measure the current situation (F-16), which ignores the frequent presence of much louder aircraft (F-18, F-22) never mind the anticipated presence of the F35.sy

For these reasons alone, independent of the administrative and factual errors in the EA, require a full EIS.

Thomas Bever

Regents' Professor, Linguistics, Psychology, Neuroscience, Cognitive Science, Education

From: Paul Formentini [mailto:paulf@kcmech.net] Sent: Friday, September 14, 2012 2:39 PM To: 355 FW/PA 355th FW Public Affairs Subject: Attn: OSB EA Comment Submittal

355th Fighter WIng Public Affairs

3180 S. First Street

Davis-Monthan AFB, AZ 85707

September 14, 2012

Dear Sirs,

We are writing to state our concerns about the environmental assessment report regarding the expansion of Operation Snowbird, based at Davis-Monthan Air Force Base.

It appears that this report has concluded that the noise levels from the increased number of flights as well as the type of aircraft taking part in these flights would be 'insignificant' over the Broadway-Broadmoor neighborhood without a complete and proper impact study.

Also the safety data on the types of aircraft being flown is not complete. In addition, the OSB flight pattern over Broadmoor and other midtown neighborhoods has not been studied.

My wife and I have lived and worked in the Broadmoor area for over thirty years and are extremely concerned about how OSB will affect our quality of life.

We respectfully request a full and objective environmental impact statement be made to address these concerns prior to any decision.

Thank you for your attention to this manner.

Paul and Bonnie Formentini

2634 E. Croyden

Tucson, AZ 85716

From: Barbara Kuelbs <u>[mailto:barbkuelbs@yahoo.com]</u> Sent: Friday, September 14, 2012 2:34 PM To: 355 FW/PA 355th FW Public Affairs Subject: OSB EA Statement

To Whom it May Concern:

I have to say that after living under the flight path of the "snowbird" flight operations for 18 years, they have become increasingly more prevalent and disturbing. Increasing the number of flights with larger and noiser aircarft will make it intolerable to continue living in this vicinity! I am retired and cannot afford to move, and covering my ears does not do the trick! The disturbance of overflights to our daily lives is huge; every day we are drowned out by roaring engines while doing pool exercise classes at Midvalley Athletic club, walking my dogs at Reid Park, or simply having a conversation on a neighbor's porch (or making a phone call on mine).

Please, fly elsewhere! Barb Kuelbs 2920 E 18th ST Tucson, AZ 85716 From: Katya Peterson [mailto:katya@polymap.net] Sent: Friday, September 14, 2012 11:05 PM To: 355 FW/PA 355th FW Public Affairs Subject: Ooperation Snowbird

To whom it may concern and to those of you who will actually read this comment:

How is it possible that you ask for comments and you don't actually care what we say. I say this because no matter what the people of Tucson have said in comments, you don't respond. To say that you have done sound studies is a manipulation of science. To produce your predetermined results you average into a 24 hour time period the sound impact of a specific flight over our homes.

In a real democracy, the response of the people who elect their own government would have say in the outcome of the F16 or Snowbird project. In a fake democracy, neither our actions nor our words have any bearing on the outcome. You have empowered yourselves to make decisions for us instead of our making decisions for our own community or security.

Katya Peterson

From: tracy pitt [mailto:tp2tp@mac.com] Sent: Friday, September 14, 2012 10:58 PM To: 355 FW/PA 355th FW Public Affairs Subject: OSB EA Comment Submittal

September 14, 2012

355th Fighter Wing Public Affairs Office Attn: ACC/A7P 3180 S. First Street Davis Monthan AFB. AZ 85705

Dear Sirs,

I am writing in response to the draft Environmental Assessment for Operation SnowBird that is run out of Davis-Monthan AFB in Tucson. The Air Force must conduct a full Environmental Impact Study of the proposed expansion of Operation SnowBird for several reasons. First, DM AFB is not a stand alone base removed from an urban environment. As Tucson has expanded around the base, the impact of noise has increased on city residents. I work at an elementary school 4 blocks east of the University of Arizona. We are fortunate to have a beautiful outdoor stage in our courtyard. Unfortunately, a portion of almost every assembly or performance is drowned out by jet noise. Likewise, it is common that P.E. lessons are interrupted when students can't hear adults give instructions over the sound of the jets.

Another reason a full EIS needs to be completed is to study implications for safety of city residents due to increased sorties. I was a student at Tucson High in October of 1978 when the A7D Corsair jet from DM crashed adjacent to Mansfeld Middle School. I will never forget running toward the crash site looking for my sister, a Mansfeld student.

According to a local newspaper report, "Witnesses rushed to the scene to help and police said a crowd of 3,000 people gathered within 10 minutes." Such was the density of this area in 1978. Now the area is even more dense with university dormitories and department buildings. And the practice field the 1978 pilot was aiming for is no longer an empty lot; it is the Student Rec Center at the U of A. Empty lots have been developed steadily over the past 40 years, leaving no more "outs" for pilots in training like Operation SnowBird pilots.

Operation SnowBird has not been subjected to an Environmental Impact Study since 1978. It is time for a full EIS to be undertaken to properly assess the effects of the program on our growing city.

Sincerely, Tracy Pitt From: C Tanz [mailto:azctanz@gmail.com] On Behalf Of Chris Tanz Sent: Friday, September 14, 2012 1:35 PM To: 355 FW/PA 355th FW Public Affairs Subject: OSB EA COMMENT SUBMITTAL

To: 355th Fighter Wing Public Affairs 3180 S. First Street Davis-Monthan AFB, AZ 85707

Dear Sirs/Madams,

We have read the draft Environmental Assessment of expanded OSB operations at Davis-Monthan and are concerned about many aspects of the study and about its conclusion that there would be No Significant Impact on the human environment of doubling the number of OSB flights.

NOISE ANALYSIS

We challenge a noise analysis that's stated in terms of average noise over a 24-hr period. As people who live underneath the flight path, we know that people don't experience noise "averages"; we experience loud PEAKS of noise and are jolted by them in the daytime and wakened by them at night.

The baseline for analyzing the increase in noise as a function of more flights and as a function of noisier planes is arbitrarily taken as 2002. But there has been no official EA or EIS review of the OSB program since 1978. So what's being called a potential "doubling" of flights (and noise?) is really much more than a doubling since the last review.

SAFETY

We are concerned about the safety of pilot training being conducted over a populated metropolitan area and especially about flight training with live ordnance. The EA seems to be trying to provide reassurance on this subject when it states: "Whenever OSB aircraft depart DMAFB with live weapons on board, the departure would be required to be on Runway 12; OSB aircraft with unexpended live ordnance would recover only to Runway 30." Apparently these are the same runway. We would like a statement that enunciates a clear policy ("There will be no armed flights over residential areas of the city") and shows how that policy will be implemented in a way that the public can understand.

The EA has a lot of mumbo-jumbo throughout that anyone would be challenged to understand. Here's another example, this time relating to the designation of some residential areas as "not suitable for residential use": "The absence of viable alternative development options should be determined and an evaluation indicating a demonstrated community need for residential use would not be met if development were prohibited in these zones should be conducted prior to approvals." p. 3-3

PLAIN WRITING

The Plain Writing Act (HR 946) requires agencies to write information in plain language to help Americans read, understand and use government documents. Doesn't this apply to the Air Force too?

We are asking for a full Environmental Impact Statement, that uses as a baseline the date of the latest EA or EIS, that provides an intelligible analysis, and that draws its conclusions in an understandable way from its analysis.

Thank you, Chris Tanz 9/14/12 15 Calle Conquista, Tucson, AZ 85716 <<u>ctpolit@gmail.com</u>> From: noreply@dma.mil [mailto:noreply@dma.mil] Sent: Monday, September 17, 2012 2:17 PM To: 355 FW/PA 355th FW Public Affairs Subject: Feedback: Operation SnowBird Environmental Assessment

Dear Sirs

We are writing to join in with our neighbors in response to the draft Environmental Assessment for Operation SnowBird OSBEA operating out of Davis-Monthan AFB. We share their concerns and insist that the Air Force conduct a full, unbiased. Environmental Impact Study on the proposed expansion of Operation SnowBird. The results of this EIS should be used to realign the mission of Davis-Monthan AFB to be more compatible with its urban embedded location.

The citizens we represent in Miramonte neighborhood, value DM AFB's presence in Tucson, but would like its mission to take into account the fact that it is embedded in a community of nearly one million persons, and understand the full environmental impact of this embedding, mitigating that impact as appropriate. Thus, we are not in agreement with the finding of no significant impact [FONSI] from the proposal to more than double the number of flights participating in OSB, including more foreign aircraft and more, noisier domestic aircraft than is currently the case. We request that a full Environmental Impact Study EIS be undertaken so that the true environmental impact on the Tucson community and its surroundings will be correctly assessed.

Our first specific concern is safety. The OSB EA presents no data to corroborate the few statements on safety. DM operations have had two accidents in the last 40 years, including fatalities. Increasing the number of sorties by trainees with armed aircraft over heavily populated areas seems problematical, and requires at least a more detailed analysis. The special dangers of the OSB program are due to the fact that its pilots need practice and training, by definition.

Our second concern is noise. The noise analysis in the OSB EA omits the noisiest aircraft that the OSB program sometimes has as emamples the F-22 and Harrier in its analysis. There are almost no details on how analysis was done or what assumptions about power levels and aircraft altitudes were used. There is no comment on the disruptive effect on educational institutions, such as the University of Arizona; there is no recognition that the 24 hour noise averages include short term bursts of noise greater than 85 db.

There are also issues of environmental justice. The population most severely affected, near the northwest end of the DM runway, is primarily minority. These people are within the 75 dB, 24 hour averaged, contour, where damage is predicted, and over 130 homes will be added as a result of the proposed doubling of flights. No mitigation measures are proposed in the new plan.

Please do not hesitate to contact us with any questions you might have or to provide additional information.

Richard Alexander

President, Miramonte Neighborhood Association

CC: Mayor and City Council, Secretary of the Air Force, Senators McCain and Kyi, Congressman Barber, Congressman Raul Grijalva

E-mail sent by Richard Alexander <<u>richarda_10918@yahoo.com</u>> all replies should be sent to Richard Alexander <<u>richarda_10918@yahoo.com</u>>.

Using the ReplyTo button on your e-mail client will send replies to Richard Alexander <<u>richarda_10918@yahoo.com</u>>.

From: Mort Womack [mailto:mortwomack@mindspring.com] Sent: Monday, September 17, 2012 8:50 PM To: 355 FW/PA 355th FW Public Affairs Cc: Jonathan Rothschild; Regina Romero; Paul Cunningham; Karin Uhlich; Shirley Scott; <u>Richard.Fimbres@tucsonaz.gov</u>; Steve Kozachik; Steve Farley; <u>district2@pima.gov</u>; <u>district5@pima.gov</u>; <u>district4@pima.gov</u> Subject: ATTN:OSB EA COMMENT SUBMITTAL

355th Fighter Wing Public Affairs

3180 S. First St.

Davis-Monthan AFB, AZ 85707

Attn: OSB EA Comment Submittal

I have lived in Tucson for nearly 25 years and the noise of the Air Force jets has always bothered me a great deal, but every year it seems to get worse. When I am in my backyard and the jets go over my house at times they are so loud that I can't hear a person talking who is standing right next to me. Now that I am retired I spend the majority of my day gardening, relaxing, playing music, and doing extensive home repairs, so much of my day is spent outdoors, even in summer. Obviously the jet noise is much greater outside. The noise level generated by the current F-16's already hurts my ears, even with ear plugs, and greatly reduces the quality of my life. I can't imagine living here with even louder planes and many more flights. I have spend 25 years creating a lush garden out of a bermuda yard. It has extensive drip irrigation and low water use features and mature trees forty feet high. There is no way I can move and ever recreate what I have spent years doing here!

It is intolerable that my government in this case, the Air Force, would force this expansion upon us tax payers without even giving us a decent hearing or a realistic assessment of the human costs the Air Force proposes. This isn't Russia--we don't live under Putin's thumb! We expect our government, both local and national, including the Air Force, to seriously weigh the effect of their actions against the citizens they are supposedly here to protect. This current draft assessment is a farce--you need to seriously look at the effects your proposal to expand Operation Snowbird will have on our safety, noise pollution, and economic well being. Instead of being good for Tucson's economy, it will damage our tourist industry as well as discourage the type of high tech development our city needs, not to mention the further devastation it will bring to property values and quality of life for people living in the neighborhoods near the planes. That is not a small area as the A!

ir Force contends with their self selected parameters, but the area affected extends well into the U. of A. area and encompasses a large part of central Tucson.

This whole expansion proposal should be dropped, but that probably is expecting too much common sense and human decency. At the very least we should be given an objective environmental impact statement that completely and honestly discusses what these proposed changes would mean to the central area of Tucson. The current draft assessment is totally inadequate for that task and has to be redone as a serious document, not a sham!

Thank you for your time--sincerely yours,

Linda Phelan

2704 E. Drachman St. Tucson, AZ 85716 September 14, 2012 From: mary profeta [mailto:mpmadden@hotmail.com] Sent: Tuesday, September 18, 2012 8:33 AM To: 355 FW/PA 355th FW Public Affairs Subject: Operation Snowbird

Please do not increase the amount of sorties over Tucson. We need a independent noise study and not the one the Air Force did. I am pro America and our military but more study needs to be done. We do not want a terrible accident over the metro area. There is a huge desert that has no population to choose from.

More study is called for. This is not Afghanistan or the Middle East. We are partners in the love of our country.

My address is 2050 E 10th St. Tucson AZ.

Mary

From: steve raines [mailto:dotheblues@gmail.com] Sent: Tuesday, September 18, 2012 9:36 AM To: 355 FW/PA 355th FW Public Affairs Subject: OSB EA Comment submittal

To All Concerned;

My wife and I have lived in Tucson for 30 years and have several rental properties in the mid town area. We are both saddened by the increase in noise in our area. Have you ever had your grand daughter run screaming into the house, covering her ears, crying and asking why? And how about when we had a large window in our daughter's house shattered by a jet during the air show? I have nothing against the military and I'm not looking to have the base closed. But I am vehemetely opposed to the NOISE! Send the F35s and operation snowbird to Phoenix where they think more about money than peace and quiet. We're in the Speedway/ Swan area and we're tired of it! Steve and Elaine Raines, 814 n desert ave., tucson 85711 at 327-6415 From: bob segal [mailto:beelzeblob@yahoo.com] Sent: Tuesday, September 18, 2012 1:15 PM To: 355 FW/PA 355th FW Public Affairs Subject: OSB EA Comment Submittal

To whom it may concern,

This is the second time that I am asking that you stop flying your painfully loud jets over Tucson. There is no good, sane reason for flying over central Tucson to access DMAFB unless it is to deliberately intimidate the populace. Presumably you're charter is to protect us, is that not correct? Well, the noise from these jets is so loud that it is literally painful to my ears and disruptive to conversation and work while they fly over head. You can fly these jets easily south away from the most heavily populated areas of Tucson.

Bob Segal Tucson, AZ From: Janice Davila [mailto:jrae2256@msn.com] Sent: Wednesday, September 19, 2012 8:42 PM To: 355 FW/PA 355th FW Public Affairs Subject: Operation Snowbird EA Comment Submittal

355th Fighter Wing Public Affairs 3180 S. First Street Davis-Monthan AFB, AZ 85707

Dear Sirs,

I want to express my concern regarding the results of the environmental assessment report on the Operation Snowbird expansion at Davis-Monthan Air Force Base. I live in the Country Club Manor district and to say that doubling the flights over my area will not impact my quality of life is ludicrous. The different types of aircraft being brought in over heavily populated neighborhoods and schools is a huge safety issue, let alone the increased noise this will cause. The EA does not address these issues with supported data.

I request a full, objective environmental impact statement that more accurately assesses the impact of OSB expansion on the surrounding Tucson community prior to any decision.

Thank you for your attention.

Janice Davila 2548 E. 20th Street Tucson, AZ 85716 From: Carol Miller [mailto:carolmiller@newmexico.com] Sent: Monday, September 24, 2012 9:06 PM To: 355 FW/PA 355th FW Public Affairs Subject: Receipt Requested: ATTN: OSB EA COMMENT SUBMITTAL

Attached is the comment of the Peaceful Skies Coalition on the United States Air Force Draft Environmental Assessment for the Proposed Update and Implementation of the National Guard Bureau Training Plan 60-1 in Support of Operation Snowbird.

Please acknowledge receipt of the submission.

Thank you,

Carol Miller President Peaceful Skies Coalition

Peaceful Skies Coalition

c/o P.O. Box 322 Arroyo Hondo, New Mexico 87513

September 19, 2012

VIA E-MAIL

ATTN: OSB EA COMMENT SUBMITTAL 355th Fighter Wing Public Affairs 3180 S. First Street Davis-Monthan AFB, AZ 85707

Re: <u>Comments on the Draft Environmental Assessment</u> Proposed Update and Implementation of the National Guard Bureau Training Plan 60-1 in Support of Operation Snowbird, Davis-Monthan Air Force Base, Arizona.

To Whom It May Concern:

Peaceful Skies Coalition is submitting comments on the United States Air Force Draft Environmental Assessment for the Proposed Update and Implementation of the National Guard Bureau Training Plan 60-1 in Support of Operation Snowbird (OSB) in compliance with the National Environmental Policy Act of 1969, 42 U.S.C. § 4331, et seq., (NEPA).

These comments are submitted during the requisite comment period by the Peaceful Skies Coalition (Commenters). The Commenters request that Carol Miller, President of Peaceful Skies Coalition, be placed on the recipient list to receive notice of any developments in the USAF NEPA review process for this proposal and any related documents issued by the USAF in the course of its NEPA review of this proposal. The Commenters further request that these comments be included as part of the administrative record. Additional comments may also be submitted separately by members of this organization, its officers, and other interested citizens associated with the organization.

Peaceful Skies Coalition has commented to the USAF on several other NEPA issues. As each Draft EA or EIS is studied, coalition members have gained insight into the enormity of recent Air Forces expansions on the people, wildlife, range and farm animals, precious water, and land – all without truly informed consent.

Other commenters will address flaws in various sections of the Draft EA. Peaceful Skies Coalition is primarily addressing serious, fundamental problems with the Draft EA and the numerous ways in which it fails to meet the requirements of the NEPA.

Recommendation: Withdraw the Draft EA Document for Multiple Violations of NEPA

The Draft EA does not comply with the NEPA. The public is being asked to comment on environmental impacts of an expansion in isolation from all current and adjacent activities.

The Peaceful Skies Coalition is aware that a tremendous military expansion is underway within the United States and that the Air Force and other branches of the military are simultaneously conducting numerous Scoping Meetings, Public Hearings, Draft and Final EAs and Draft and Final EISs. In order to provide informed comment on the OSB Draft EA, the public needs information about the other current regional and national base expansions and changes. Without complete information there is no way to determine the actual impacts of the OSB expansion.

DOD Must Develop a Comprehensive Baseline for All of Its Activities

For the purpose of establishing a baseline from which to address cumulative affects, the Department of Defense (DOD) should initiate a Continent-wide EIS for all military flights and training, whether manned or unmanned, by any and all branches of the military and military contractors. Wildlife, water and air quality, and avian flyways are just a few of the potentially affected natural systems, which exist in very large bioregions not defined by lines drawn on a map around a single base.

For the fourth time, the Commenters have formally put in writing the request that the USAF diligently prepare a comprehensive programmatic EIS for all training areas, operations and activities in at least the lower 48 states and arguably in the Continent, including Alaska.

Council on Environmental Quality (CEQ) policy states that actions which are:

(1) closely related, i.e., are interdependent parts of a larger action and depend on the larger action for their justification; or (2) are cumulative actions, which when viewed with other proposed actions have cumulatively significant impacts; or (3) are similar actions that have similarities that provide a basis for evaluating their environmental consequences together, such as common timing and geography, need to be considered in one EIS. *See* 40 C.F.R. § 1508.25. Based on this policy, the numerous training areas and activities, or operations, throughout the western United States, and indeed the entire country, should be considered in one, single programmatic or comprehensive EIS.

Much of the information presented in the Draft EA violates this policy by providing no recognition of adjacent activities.

When viewed with other proposed actions, there are cumulatively significant impacts on human communities and wildlife populations and habitat. These projects qualify as "similar actions" that provide a basis for evaluating their environmental consequences together, such as common timing and geography. These projects therefore must be analyzed in one, national programmatic EIS.

Preparing a single comprehensive or programmatic EIS is the only way the USAF genuinely can explore and evaluate a reasonable range of alternatives with varying overflight frequency and

alternate locations, as well as alternative methods of training (including virtual flight simulation).

Commenters believe the DOD does not want the public to learn all of the negative environmental impacts of its activities. For example, we are aware that at one time the DOD had initiated a programmatic EIS for its entire low altitude training program on a nationwide basis, and then abruptly discontinued the process after early administrative drafts revealed the presence of very significant cumulative impacts across the country.

References and Self-Citation

The document as released is incomplete, inaccurate and overly reliant on old data. Stock references and citations – many decades old - are again included, apparently to try to make the document appear convincing and serious. An EPA noise study from 1974 is cited throughout the Draft EA, a study now thirty-eight years old! The public is offered the same citations in NEPA action, after NEPA action by the air force. It is time for current, relevant science and relevant new data regarding the cumulative impacts of plans for tremendously increased training programs.

Many of the references included are documents produced by the military, other parts of the federal government or federal contractors. None of these self-citations can be considered independent and, in fact, reveal a conflict of interest with the data used for this Draft EA.

Because of the poor quality of the document, it is possible to go through it section-by-section and critique each for flawed data, incomplete data, misrepresentations of fact, and failures to address significant requirements of NEPA. This comment from Peaceful Skies Coalition will not do a section-by-section critique, because the Coalition is aware of numerous technical and legal experts who are providing excellent comments on specific errors and omissions.

This Draft EA is Not in Compliance With NEPA

The USAF is required to comply with all of the requirements of NEPA assuring an independent and complete document is prepared for affected agency, tribal governments and the public. The statute requires that the following range of issues must be included and subjected to independent, in depth analysis:

Direct Impacts.

A NEPA-compliant EA must analyze the direct impacts of the proposed action. This includes but is not limited to: impacts to the health and socioeconomic and psychological wellbeing of Native American tribes, other residents of the area, and all those who live in and visit the proposed impacted areas from within the United States and around the world; impacts to livestock and other domestic animals; impacts to wildlife and wildlife habitat; impacts to wilderness areas, Areas of Critical Environmental Concern, and other environmentally sensitive areas; air quality impacts; impacts to archaeologically, anthropologically, historically, spiritually, and culturally significant areas, impacts to scenic areas, impacts to recreation areas; and impacts to tourism.

The area under consideration supports an abundant and diverse array of wildlife including prime

habitat for many species listed as threatened and/or endangered under the Endangered Species Act, and irreplaceable in many respects. The Draft EA fails to fully describe these potential threats or any mitigation plans to eliminate or limit the threats.

Indirect Impacts.

The NEPA review process is required to carefully analyze the indirect effects of the proposed action. Indirect effects are effects that are caused by the action but occur later in time or are further removed in distance. *See* 40 C.F.R. § 1508.8 (b). Indirect effects "may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems." *Id.* Here, the indirect effects shall include, but are not limited to, negative socioeconomic impacts, environmental injustice impacts, and the negative impacts to tourism, public health, hunting, and recreation that will result from the proposal.

The effects on the real estate market, both home and land values, could be devastating and, although raised repeatedly at the community meetings, are inadequately addressed in the Draft EA. The proposed basing of these flights is urban, within a heavily populated and growing city. Certain urban areas will be affected more than others and specific data is needed, not regional averages.

Cumulative Impacts.

The Commenters find that absolutely no attention was seriously paid to identifying or analyzing any cumulative impacts in the Draft EA. In fact, this failure to consider cumulative impacts was one of the weakest parts of the document provided to the public. It failed to take into account the requirements of cumulative impacts analysis in settled case law, regulation and policy.

The Federal courts have ruled that the government "cannot isolate a proposed project, viewing it in a vacuum."

Adjacent Area and Multi-State Impacts NOT Addressed:

While the Draft EA references other air force activities within Arizona, *Figure 1-2: Training Airspace in the Vicinity of Davis-Monthan AFB*, page 1-4 shows considerable airspace in New Mexico. Using the search function within the Draft EA, New Mexico never shows up a single time, despite impacts that might potentially occur there.

The Davis-MonthanTombstone MOA includes the entire boot heel of New Mexico, a region famous internationally as a birders paradise especially in the winter months when proposed OSB training expansions would occur.

Davis-Monthan's Reserve and Morenci MOA's, much of which are also located in New Mexico, are directly adjacent to the Holloman Cato MOA. The cumulative impacts caused by the adjacency of three MOA's must be addressed. In addition to Holloman, Kirtland and White Sands Missile Range activities should be part of the assessment to more accurately capture all of the requirements of NEPA, including wildlife, rangeland, bird migration, watershed and human impacts.

This failure to address cumulative impacts supports the request by the Commenters that the current Draft EA be withdrawn and a document in full compliance with law and policy be developed.

The NEPA review process requires taking a hard look at the cumulative impacts of the proposed action. A cumulative impact is "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." 40 C.F.R. § 1508.7.

Properly analyzing cumulative effects must include: (1) identifying the significant cumulative effects issues associated with the proposed action; (2) establishing the proper geographic scope for the analysis; (3) establishing an appropriate time frame for the analysis; and (4) identifying other actions affecting the resources, ecosystems, and/or human communities of concern.

Establishing the proper geographic scope or boundary for a cumulative impacts analysis is extremely important because the proposed action will have direct, indirect, and "additive" effects on resources *beyond the immediate* area. To determine the appropriate geographic boundaries for a cumulative effects analysis, therefore, the USAF environmental analysis should first: (1) determine the area and resources that will be affected by their proposed action (the "project impact zone"); (2) make a list of resources within that area or zone that could be affected by the proposed action; and (3) determine the geographic areas occupied by those resources outside the immediate area or project impact zone. In most cases, the largest of these areas will be the appropriate area for the analysis of cumulative effects. By way of example, for resident or migratory wildlife, the appropriate geographic area for the cumulative impacts analysis will be the species habitat or breeding grounds, migration route, wintering areas, or total range of affected population units. *See e.g., NRDC. v. Hodel*, 865 F.2d 288, 297 (D.C. Cir. 1988.

Another important aspect of a cumulative impacts analysis that the USAF will need to consider is an assessment of other past, present, and reasonably foreseeable actions affecting the resources, ecosystems, and/or human communities of concern. According to the CEQ, the "most devastating environmental effects may result not from the direct effects of a particular action, but from the combination of individually minor effects of multiple actions over time." Council on Environmental Quality, *Considering Cumulative Effects Under the National Environmental Policy Act* 1 (January 1997) *available at* http://ceq.hss.doe.gov/nepa/ccenepa/ccenepa.htm (last visited November 2, 2011). The requirement to consider cumulative impacts, therefore, is designed to avoid the "combination of individually minor" effects situation – to avoid the "tyranny of small decisions" or death by a thousand cuts scenario. *See e.g., Grand Canyon Trust v. FAA*, 290 F.3d 339, 346 (D.C. Cir. 2002).

The USAF must conduct a NEPA review that takes into account and analyzes state, private, and other federal actions as well as natural occurrences or events that have taken place, are taking place, or proposed to take place that will similarly impact the region's wildlife populations and

habitat, and human communities. Individually, each flyover – though serious – may not rise to the level of posing a significant risk. Collectively, however, the impacts of all of these and other activities – whether conducted by private individuals, state agencies, or other federal agencies – may be significant and must be analyzed. *See e.g., Grand Canyon Trust*, 290 F.3d at 346 (discussing collective impacts to Zion National Park); *NRDC v. Hodel*, 865 F.2d 288 (D.C. Cir. 1988). As the D.C. Circuit Court noted, federal agencies must "give a realistic evaluation of the total impacts [of the action] and cannot isolate a proposed project, viewing it in a vacuum." *Grand Canyon Trust*, 290 F.3d at 342. Even "a slight increase in adverse conditions . . . may sometimes threaten harm that is significant. One more factory . . . may represent the straw that breaks the back of the environmental camel." *Id.* at 343 (*quoting Hanly v. Kleindienst*, 471 F.2d 823 (2d Cir. 1972)).

The USAF cannot analyze the direct and indirect effects of the proposed expansion of Operation SnowBird in isolation, but must examine the cumulative effects of the proposed project together with all other Department of Defense training areas and operations in and around Arizona, New Mexico and all adjacent states. As explained below, this comprehensive analysis is required by NEPA and mandates the preparation of a programmatic EIS that addresses the entirety of training programs.

Synergistic Effects – It's Time for the Air Force to Use Current Science

Since the 1970's and 1980's, when several of the cited studies were completed, most areas of scientific study have become much more aware of synergistic effects; not only the synergy generated from a single project in isolation but also the synergistic effects of all other activities. The Air Force has tried to ignore synergy for too long. For any valid NEPA assessment or EIS, new independent, scientific research is needed to identify and quantify the synergistic effects of the current baseline and any future projects.

Among the areas of science, which are taking synergy seriously, are climate science, human health impacts, and wildlife studies to name only a few. Without considering synergistic effects, the Cumulative Impacts section of the Draft EA falsely assumes all effects to be only additive and therefore declares them minimal or nonexistent. In reality, these impacts are not only additive, but also have synergistic effects, which in many cases will reverse the conclusions expressed by the air force.

Establish a Baseline.

The USAF NEPA review process has not established in this Draft EA a proper baseline upon which to base its impacts analyses and conduct the requisite "trends analysis," i.e., an assessment of the environmental impacts of all activities affecting the various resources over an extended period of time. By failing to properly define the baseline and from the baseline engage in a trends analysis, the USAF will be unable to track any effects and changes that will occur over time. At a minimum, baseline data on locations of wildlife and migratory bird paths, and the current exposure of animal populations and human communities to sudden heightened noise levels (startle response) is needed in order to properly analyze the impacts (direct, indirect, and cumulative) of the proposed action.

Alternatives.

The USAF NEPA review process will need to consider a reasonable range of alternatives. Under NEPA, federal agencies must "study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources." 42 U.S.C. § 4332(2)(E); *see also* 40 C.F.R. § 1508.9(b). The discussion of reasonable alternatives section is the "heart" of any environmental analysis under NEPA. 40 C.F.R. § 1502.14. This standard has not been met.

<u>Best Scientific Information</u>. All agencies, including the USAF "shall insure the professional integrity, including scientific integrity, of the discussions and analyses in environmental impact statements." 40 C.F.R. §1502.24. Information "must be of high quality." 40 C.F.R. § 1500.1(b). Accurate "scientific analysis [is] essential to implementing NEPA." *Id.* The USAF failed to review and collect sufficient scientific data. As stated above, much of the data is old and/or unrelated to the specific project. This resulted in a Draft EIS that does not provide information sufficient to analyze the direct, indirect, and cumulative impacts of the proposed action.

Topics for study, which were not addressed at all include watershed impacts from accumulated perchlorates and other aircraft fuel pollutants, fire danger in drought-ridden forests, effects on wildlife and livestock. Additionally effects on current and future tourism in the Tucson region and renewable energy development must be studied.

<u>Socioeconomic Factors and Environmental Justice</u>. The preceding pages document a number of weaknesses and violations of statute, regulation and policy. The Draft EIS fails to establish a baseline, fails to consider cumulative impacts, and presents very limited science regarding potential impacts to humans or natural systems. Despite these significant, overall shortcomings, no section is as dismissive of impact as the Socioeconomic and Environmental Justice sections with insufficient provision for mitigating the impacts.

A comprehensive study of socioeconomic and environmental justice impacts is needed. The affected areas extend far beyond the minimal information provided about Pima County, where the base is located. Further study must consider impacts on the regional market/services level, many of which cross both state and county lines.

These comments are submitted by the Peaceful Skies Coalition on the Proposed Update and Implementation of the National Guard Bureau Training Plan 60-1 in Support of Operation Snowbird, Davis-Monthan Air Force Base, Arizona. The mission of the Peaceful Skies Coalition is to participate in this and other important decisions affecting public resources in United States.

In conclusion, we ask that this Draft Environmental Assessment be withdrawn and that the DOD first complete an EIS for all continental low, middle and high altitude flights both manned and unmanned for all DOD branches before attempting any changes to the current usage. We believe the public will be outraged to learn how much airspace, how many flights, how much pollution, and how much money is literally burned overhead by the DOD and that the public will demand that military airspace and training be reduced and not expanded.

We hope you find these comments to be helpful, informative, and useful in your efforts to comply with the NEPA and other substantive statutes. If you have any questions or comments, or wish to discuss the issues raised in this comment on the Proposed Update and Implementation of the National Guard Bureau Training Plan 60-1 in Support of Operation Snowbird in greater detail, please do not hesitate to contact the Peaceful Skies Coalition representative listed below.

Sincerely,

Carol mille

Carol Miller, President

On *Behalf* of:

Peaceful Skies Coalition P.O. Box 322 Arroyo Hondo, NM 87513 From: Mary Myers [mailto:takhi65@gmail.com] Sent: Wednesday, September 26, 2012 3:29 PM To: 355 FW/PA 355th FW Public Affairs Subject: ATTN: OSB EA Comment Submittal

I live in the Blenman Elm neighborhood of Central Tucson.

I am concerned because the Air Force intends to double the number of OSB flights, and to use louder aircraft than they use now, and to make some flights between 10:00 PM and 7:00 AM over this area. The EA provides only a superficial survey of the impacts of an expanded OSB. Before making any decisions about an operation that will affect our neighborhood, the Air Force should use a complete Environmental Impact Statement (EIS) to carefully analyze the impacts. Please consider this request.

Thank you, Mary Myers 2814 E. Lester St. Tucson, Az 85716 From: Michael Singervalt [mailto:mjs2526@cox.net] Sent: Wednesday, September 26, 2012 2:44 PM To: 355 FW/PA 355th FW Public Affairs Subject: Operation Snowbird

I'm writing to express my concern about your proposal to expand "Operation Snowbird." My understanding is that your proposal will add more, and louder, flights over the Blenman Elm section of Tucson. While I understand we need to balance the needs of the Air Force with the needs of the town, I am opposed to any type of expansion.

For those of us who live in Tucson, we're talking about a quality of life issue. Loud planes flying overhead would add an additional stress on my life that, frankly, I'd like to avoid.

Please reconsider to proposal to expand "Operation Snowbird," or at the very least, do a more thorough study of the environmental impact of your proposal, before going through with it.

Michael Singervalt 2731 E. Elm St. Tucson, AZ 85716 From: Alex Wilson [mailto:ahwilson3@yahoo.com] Sent: Wednesday, September 26, 2012 2:39 PM To: 355 FW/PA 355th FW Public Affairs Cc: garyahunter@gmail.com Subject: ATTN: OSB EA Comment Submittal

Good afternoon,

I live in the Blenman Elm neighborhood at work at the University of Arizona, both in Tucson.

I respectfully request that a more complete Environmental Assessment be completed on the impact of the proposed growth of Operation Snowbird in Tucson. I am frequently impacted with noise pollution at both my home and office, to the extent that conversation and work is not possible when the jets are landing. I am also concerned about both air, ground, and water pollution from the additional use of jet fuel in this program.

I think the environmental impact will be considerably greater than the "negligable" category your preliminary findings suggest, and as someone directly effected, I would like to express my opposition to the expansion and register my request for a more complete environmental impact study.

Sincerely,

Alex H Wilson 2525 E Helen St Tucson AZ 85716 520 269 6403 ahwilson3@yahoo.com From: Jane Zavisca [mailto:jz@janezavisca.org] Sent: Wednesday, September 26, 2012 1:00 PM To: 355 FW/PA 355th FW Public Affairs Subject: comment on operation snowbird expansion

I am writing as a concerned homeowner in the Blenman-Elm neighborhood. I understand that the Air Force is planning to expand its Operation Snowbird program, and has recently released a draft Environmental Assessment. I am concerned that the Air Force did not issue a complete Environmental Impact Statement.

I am not opposed a priori to the program, recognize its importance for national defense, and have not been disturbed by it to date. However, it is impossible to come to an informed opinion based on the assessment. A thorough review of the potential impact of program expansion is warranted given how important noise is for the quality of life and public health of our community.

Regards,

Jane Zavisca 2918 E Linden St Tucson, AZ 85716 jz@janezavisca.org From: Baines Christine [mailto:sahajo@mac.com] Sent: Thursday, September 27, 2012 7:12 AM To: 355 FW/PA 355th FW Public Affairs Subject: Subject line: ATTN: OSB EA Comment Submittal

I have heard that the expansion of Operation Snowbird will use louder aircraft and will double the number of OSB flights over Blenman-Elm neighborhood. As a resident of that neighborhood I have concerns.

I support the Air Force and am proud to have Davis Monthan here in Tucson. My father was stationed at Davis Monthan during WWII, I support the mission and feel that Davis Monthan is a good neighbor. My concern is that the expanded OSB might bring a level of noise that makes life uncomfortable for those who live nearby. Since this is a training program why can't flights be scheduled so that they do not go over homes between 10 pm and 7 am? Are there no alternative flight patterns that would work as well?

With no desire to limit the mission of Davis Monthan and with gratitude for keeping us all safe, I hope you will remember that being a good neighbor is also desirable.

Thank you for your consideration.

Sincerely, Christine Baines 2939 E Drachman St Tucson, AZ 85716 From: Ron Michaels [mailto:ronmichaels@gmail.com] Sent: Friday, September 28, 2012 5:56 AM To: 355 FW/PA 355th FW Public Affairs Subject: ATTN: OSB EA Comment Submittal

My name is Ron Michaels, my wife's name is Elisa. We live at 2937 East Mabel Street in Tucson 85716. Our family has owned this house since it was built in 1948 in the Blenman-Elm Neighborhood. In those days the eastern city limit was Country Club, one block away. I've lived in New York City, Chicago, Los Angeles, and I've traveled just about everywhere. But this house has always been home.

In the 1950's, D-M was a SAC base. The SAC bombers that flew over every day were very large and very obvious. Neighbors would come out of their houses to gaze proudly on those B-47s and B-52s (I think those were the planes). Everybody was smiling as they looked up to see these huge aircraft go over the neighborhood at what seemed like an altitude of about 300 feet. Very noisy! As everyone turned to go back in their homes, they turned, still smiling, and waved to each other as if to say, "those are OUR boys." Nobody complained. Ever.

If the folks didn't come out of the house to watch the planes, they stood in their living rooms watching the framed photos on the fireplace walk across the mantel because of the vibration caused by those huge engines. That was fun, too.

Now we have people who have moved to our area of town (or to the end of the D-M runway) and complain about the noise these planes make as they fly over. Incomprehensible. When I asked a "complainer" (who keeps a jelly jar on his front porch so neighbors can write nasty letters about the Air Force and simply deposit them in his jelly jar so he can send them to you) why he moved to Blenman-Elm since he complains regularly about the D-M aircraft flying over. He says, "I moved here to make things better for the current residents." You see what I mean. Yet, the folks who have been here for years have no complaint about the noise. We WANT the Air Force to do whatever it needs to get done. Occasional engine noise is just one of those small payments we make as Americans to make certain that our country is safe.

You will receive letters of complaint from people who, you will discover, complain about virtually everything in their lives. Pay no attention. The letters you get that are supportive (like this one) may be fewer in number but they're much more powerful and much more representative of the actual feelings of the neighborhoods. We're on your side. God Bless!

Ron and Lisa
From: Ed & Mary Caldwell [mailto:emcaldwell71@gmail.com] Sent: Saturday, September 29, 2012 10:16 AM To: <u>"355 wgpa"@dm.af.mil</u> Cc: Gary Hunter; Mort Womack; Janepowers@cox.net Subject: ATTN:OSB EA Comment Submittal

Dear Air Force Officials,

We live near Davis Monthan Air Base and are very disturbed by the noise level of aircraft.

In recent years it has gotten even much louder. I believe that the noise level is so loud that it is causing hearing problems among adults and small children that cringe when the noisy airplanes fly over. It can cause actual ear pain. It also causes a great deal of stress for those of us who need a more quiet environment free from the extreme noise levels we now frequently have to suffer.

We hope and pray that this situation can be remedied...perhaps by wise planning, better political decisions and improved technological advancements.

Thank you for your attention and efforts to find a better solution.

Sincerely, Edmund R. Caldwell and Mary Caldwell 2702 E. Drachman Tucson, AZ 85716 From: Jane Powers [mailto:janepowers@cox.net] Sent: Saturday, September 29, 2012 3:48 PM To: 355 FW/PA 355th FW Public Affairs Subject: ATTN:OSB EA Comment Submittal

Dear Air Force Officials,

We live in the Blenman Elm neighborhood and are very concerned about the increase in the number of flights over our neighborhood and the accompanying exposure to the extreme noise levels of the planes. Those noise levels are at best an unwelcome distraction that is repeated many times daily and at worse a detriment to our health and well-being. Further, the negative affect on property values due to this type of intrusion is well documented.

Thank you for your consideration,

Jane and Don Powers 2723 E Drachman St Tucson, AZ 85716 From: Page [mailto:greenlakecats@earthlink.net] Sent: Sunday, September 30, 2012 1:42 PM To: 355 FW/PA 355th FW Public Affairs; Page Subject: ATTN: OSB EA Comment Submittal

Thank you for this opportunity to comment.

As a neighbor, landowner, and engaged citizen, I respecfully request that PRIOR to the Air Force's moving ahead with this project a full, transparent, environmental impact review be performed. There are health and safety concerns that have simply not been addressed. In addition we request that the Air Force perform an analysis of the economic impacts of these exercises be undertaken. It's surprising that anyone, any business, could possibly oppose having such information. The more people are allowed to have their concerns informed, the long term support of Tucsonians will be engendered.

Most sincerely, Page Day Blenman Elm Tucson From: azbride@cox.net [mailto:azbride@cox.net] Sent: Tuesday, October 02, 2012 10:14 AM To: 355 FW/PA 355th FW Public Affairs Cc: mayor1@tucsonaz.gov; ward5@tucsonaz.gov Subject: OSB EA COMMENT SUBMITTAL

Dear Sirs,

Regarding the Draft OSB EA from July 31, 2012, I strongly disagree with your Finding of No Significant Impact regarding your alternatives mentioned in this Draft EA.

In this particular e-mail are my own personal remarks. I will also be doing a separate e-mail from the Julia Keen Neighborhood Association of which I am Co-Chair.

There are too many things to mention that are wrong with this EA, from it not being understandable to most of the public, to having half-truths, mis-leading information, and fake noise information (not real), and missing aircraft listed in your EA. No Spanish translation in a timely manner, until it is just about too late, and then only three pages are translated with no meetings or other public information for the Spanish-speaking people, and you have the nerve to say that you are providing this translation as a "convenience." Have you not considered that it might be required by Law. It has been difficult even discussing these issues with Engish-speaking people. I strongly request that an EIS be done.

I personally love America, am patriotic, and appreciate all branches of the military. And please remember why we have a military at all. I may not have the official statement of why the military exists, but they are supposed to protect America. We in Tucson, Arizona are not being protected by some of the missions of DM AFB when they are destroying our health, family, property, pets, sanity, schools, tourism, and so on and so forth by flying directly over us, especially in the present flight path.

I am writing to give you my personal experiences that dramatically and SIGNIFICANTLY IMPACT me and even some of my neighbors by the DM AFB OSB and other missions as well from DM AFB.

My name is Rita B. Ornelas, living in the flight path directly northwest of the DM AFB runway, in the Julia Keen neighborhood, since 1985. First, I did not decide to buy a home in the direct flight path of DM knowingly; rather a friend of mine died and her son asked me to buy the house. I had never owned a house, and did not think I could afford one, but everything worked out and I was able to buy it. I have lived in Tucson since 1965, and had been here in the 1950's yearly for summer vacations, so I knew that airplanes flew in Tucson, I graduated from Tucson High School in 1967 and planes disrupted teaching, and then attended the U of A for four years and planes disrupted teaching, and began working full-time at the U of A in 1971. I happened to be working in the old Student Union at the U of A when that jet crashed in 1978. I heard the awful winding down noise of the jet, I saw the students through my window looking up, paralyzed by what they were seeing, then I saw!

the shadow of the jet fly over us. We ran towards the large windows facing the UA Mall, we thought this jet was going to crash on the Mall, we then saw the black smoke and we saw the pilot, who had ejected, coming down in his parachute. I have never been able to get that sound and sight out of my mind. Even now, when I hear that kind of sound winding down, I cringe.

Now I'm retired and still live here, and have seen many changes, especially since 2004 when our Julia Keen Elementary School was closed in order to save DM AFB from being closed, and because it was said

that a new generation of planes was coming but would be many years before they would be perfected because they were too loud. Here we are in 2012, some of these planes have been brought in and are a great problem, and some are still being worked on with many problems and very much money being spent. They new generation of airplanes are a problem not only to the Julia Keen neighborhood, but to many other neighborhoods, schools and businesses. Many people in this neighborhood do not want to move or cannot move, it is not fair that we should be subjected to such a terrible situation by the Air Force, when they should be protecting us, not harming us. It is too late now, but why would the City of Tucson allow the encroachment around DM AFB that has happened throughout the yea! rs. I also have understood that where I live, it used to be military housing at one time, in fact the Julia Keen Elementary School was built using federal funds apparently because it was intended for military students. When did this change come about? I have been here since 1985, and my friend had been here since at least 1971, when I met her.

Here are some of my experiences that have SIGNIFICANTLY IMPACTED me (there are hundres of examples, but I will only share a few with you at this time):

1. This past week, some jets have been flying that look like they have some kind of rockets or bombs on them, I do not know their names yet, I did call the DM Noise Complaint line about them and asked for a return call as to what they are called., I have not gotten a return call yet. I was out throwing the trash in the alley by my backyard, when I heard the noise of jets. I quickly tried to come inside, but I saw it was too late and had to put my fingers in my ears, and I watched them flying in the circular turn, there was two of them, very, very loud, they hurt my ears, even with my fingers in my ears. They shake my body by their horrendous vibrational noise. I watched as one flew over the neighborhood one-half block east of me, and the second one flew right over me going towards the runway to land. It happened twice in a matter of about five minutes. Four jets, two at a time, whether it was the same jets or not I don't know. It was very upsetting and I called t!

he Noise Complaint line. This time I happened to be outside, my husband usually throws the trash, but he has been sick for three weeks.

2. Which bring me to my husband being sick for three weeks now. I have talked to my neighbor who said he has seen some kind of black stuff coming down from the planes flying over our homes. I also spoke to a woman near the Air National Guard who is also in the flight path where F-16's fly over her house, and she said that lately she has noticed some kind of black oily stuff accumulating on her vents in her home, they have cleaned the system and put in filters, and the black oily stuff still comes out, and even some kind of very small plastic-like particles. I then relayed to her that I have some black stuff on top of my vents and onto the ceiling, as she said she does also, and I have cleaned it periodically with a broom, and we are breathing whatever it is, We have also cleaned our vents out and even painted the rooms, and still, the black stuff accumulates. We were comparing notes and thought perhaps this has something to do with the jets flying over our homes. W!

e would like this black stuff analyzed to determine what it is. Is this making us sick? I personally experience that when I go to other parts of Tucson, like near the beautiful Catalina Mountains and out to Oro Valley, I can breathe better and feel better. I hate to go home, and when I return home, again it is difficult to breathe clearly; but we have lived here so long that we may have gotten used to it, but we don't notice it until we go elsewhere and then return. I would like to request that the Air Force look into what this black substance is, in order to determine if it is from the jets or something else.

3. My husband and I have personally experience the noise and affects to ourselves and our home from the F-22. The first time was during the Heritage Training and Certification held at DM AFB in March

2012. It was a Sunday morning, between 11:00 am and noon, when all morning and all week we had experienced many different types of planes flying all over and over our homes, when suddenly we heard a tremendous noise on top of our roof, as if an Army Tank had been dumped onto the top of our roof, the ceiling cracked and creeked for days, I thought the roof was going to cave in. I was very shook up by this, and my dog jumped into my arms as I sat on the couch and his heart was pounding hard, and so was mine. My neighbor ran outside to see what had happened, so did my husband, car alarms were gong off all over the place. I sent my husband up to the roof the following day to see if something had fallen on the roof, he said there was nothing there. The very next day I was tol! d it was an F-22. The next day I had a meeting with my neighborhood and I relayed my experience and

others mentioned their own experience of that day, one lady thought there was an earthquake going on, the noise woke her up and the apartment was shaking.

4. The second time we experienced an F-22 or something else, maybe a Lancer Bomber, went over our home during the Air Show in April 2012. My husband has only one ear drum and has limited hearing in the other ear, and was looking at the planes outside, I was inside and was very shaken up by so many planes, when he called me outside to see a plane. He said to me, come see this, hurry up, I've never seen a plane like this. So I stepped outside my back door and I could hear the plane coming from afar anyway already, I couldn't see it at first because of our mulberry tree in the backyard, but I could hear it terribly loud, and then I saw it. Oh my, it was so low, it was humongously big, it was very sleek, I saw it from the bottom, it had a long nose and the wings were angled back, and it was slanted sideways; it was coming in to land. It scared me to death, it paralyzed me, I couldn't move, I put my fingers in my ears, my ears hurt terribly, my whole body vibrated from my!

toes to my head and my heart actually hurt and my ears were killing me, it shot my nerves, and I couldn't move. I thought it was going to come down on us. I then went inside and I was shaking and crying from the awful experience. I called the Base about 20 minutes later and I was still shaken up, I described the incident to the Noise Complaint line, Master Sgt. Hill. My husband also was affected, even with his poor hearing, he was shaken up as well. It was a terrible week, since the planes practice all week and then perform on the weekend, so we get a double exposure to all the noise and vibrations. That weekend, the day before the Air Show an F-16 caused a sonic boom which was felt in a large portion of the City, it broke windows in many places.

5. Whenever the planes fly over the house, either taking off or landing, it is a terrible experience for us. The noise and thunderous noise and vibrations affect us inside our house: we can't hear the TV, we can't talk on the phone, we can't talk to each other inside the house. It is very frustrating and the noise hurts us. If we are outside when a plane is coming over, we have to wait to talk to anybody and we have to put our fingers in our ears. Many times things fall off our shelves, our walls and ceilings are cracked, we fix them and then again they crack again. I feel that something is happening to the ground, even the floor doesn't seem stable. I feel like the vibrations of the planes is doing something to the ground under the house, and it is also doing terrible things to our bodies, and our emotions, and our health, and our pets. Sometimes when I open the door to go get the mail from the mailbox by the street, I start to go and then I hear a plane coming, !

and I close the door until the plane goes over, then I go out and get the mail, and sometimes while I am getting the mail another plane comes over. You may not think much about this, but it is very disturbing. The noise and vibrations are so terrible at times that my dog starts barking and also is frightened by the noise. We experience these kinds of things almost on a daily basis and sometimes it is very many times during the day, and now even in the evening, at night and over night and early in the morning too. And when peole come to visit, they are shocked by the noise and vibrations, and ask us how we can stand this.

6. Many of the people in my neighborhood have children, and they like to play outside, sometimes they hear the planes coming over and they start yelling or crying and run inside because of the horrific noise. There are people in the neighborhood who work out of their homes on the phone, and the noise of the airplanes affects their business because they have to yell into the phone to tell their clients to hold on, I can't hear you, an airplane is going over, then they speak, and then it happens again, another plane goes over. This is very, very disturbing to people that work out of their homes on the phone. There is another lady near me that told me about one of many incidents, this particular one was that they were planning to have their marriage ceremony in their backyard. They have a nice house and yard, they were trying to set up for the wedding when five jets flew over in a matter of six minutes and they could not hear or speak, and the noise and vibrations of thos!

e was too much for them, they decided not to have their wedding in their backyard. Another neighbor just outside the flight path said that he hears the noise of the planes inside his house, but that recently he has actually seen them flying over his house, and they are not supposed to fly over his house. I tell him that they fly all over the place, they don't have lines in the sky, and they fly all over our neighborhood, not just in the exact flight path. Another neighbor just outside the flight path did her own sound-proofing of her home and she says it helps some, but she noticed recently much more noise, and wondered how bad it was at my house. And these are just the planes that come in now to DM and to the OSB program, so what will happen if louder and more planes come in? Also, I raised one of my grandchilden for five years, and because of the horrible noise, she would cry and I would have to come up with ideas of how to make her feel better, and I would play a!

game with her and hold her and try to show that it was OK; but it was not OK, it was awful. Childen are also very, very affected by this awful noise and vibrations.

7. So what will happen if the louder planes come in as part of OSB, such as the F-22 and Harriers, and other un-named planes, and possibly the F-35 in the future. I think that some of our walls will actually tumble down, and what will happen to us inside the house. We will be killed by our roof caving in. The noise of the newer planes is way too loud for human beings to be subjected to these terrible decible levels.

The Draft EA on the OSB does not truly examine the real noise and affects to the PEOPLE and their homes, etc., and does not offer alternatives or mitigation, therefore I believe that an EIS is required. Instead of trying to bring in more and more planes and add night flights, I believe that DM AFB should concentrate more on missions that do not involve more and more loud planes, why don't they upgrade the A-10's and any other planes they use that have proven to be safe flying over Tucson, yes they are also loud, but they are not as loud as the F-16 and other planes that come in, and they seem to fly in much slower and smoother than other planes. I am sure that DM AFB and the Air Force people and the Political Elected Representatives that decide these things can come up with a better plan than what they seem to have in mind.

Your Finding of No Significant Impact is totally wrong, irresponsible, inconsiderate, lacking in significant real true information and noise data. You can't possibly, really believe that adding more planes, or doubling the planes and adding night flights will really give you a Finding of No Significant Impact. Even a child can tell you different, surely you can come up with something better.

Thank you for your time, and I hope that you consider an EIS, or consider doing less missions so that they do not include more and more, louder, and louder, and more dangerous planes right over our

heads, over our children, over our homes, our schools, our businesses, our parks, our streets, our grocery stores, everywhere.

I also request a copy of your final decision, please send it to me by e-mail or to my mailing address.

Sincerely,

Rita B. Ornelas and Ruben C. Ornelas 3679 E. 33rd St. Tucson, AZ 85713

Dated: Oct. 2, 2012

Separate copies will be mailed or forwarded to, as well as to some others as need arises: President Barack Obama Secretary of Defense Secretary of the Air Force Congressman Raul Grijalva Congressman Ron Barber Senator John McCain Senator John Kyl From: Jamie French [mailto:jmerfrench52@gmail.com] Sent: Wednesday, October 03, 2012 4:56 PM To: 355 FW/PA 355th FW Public Affairs Subject: OSB EA Comment

The EA is based on non-factual statements. The 'Snowbirds' fly over the entire densely populated city. They often depart over some of the most densely sections of the city. More often their arrival is also over densely populated neighborhoods. They fly with enough explosives to blow up vast sections of the city. They currently are beyond belief loud. Basically they, OSB, hold us hostage with ear breaking noise. They shake our homes. They wake us up. On weekends, they play attack on our homes. They practice low level landings over our neighborhoods. They are bullies. It seems that OSB has declared war on the citizens of Tucson. We will not notice if the flights double, are noisier, and fly more frequently at might? OF COURSE WE WILL NOTICE. Life will be unbearable. Jamie French-Schremmer

From: Robin <u>[mailto:robinlur@msn.com]</u> Sent: Wednesday, October 03, 2012 4:55 PM To: 355 FW/PA 355th FW Public Affairs Subject: Snowbirds

Please, lets find an appropriate location to fly these planes. I'm not against the Air Force, but I don't want me or anyone else to be blown out of our homes. Why can't you build a DM annex out in the dessert for these loud aircraft? It will still help the Tucson economy and create jobs. It is completely irresponsible to decimate citizens of this city. And I've never heard anyone address the affects of noise to the animals in the Reid park zoo. We need to care and respect their habitat, not to further stress them with deafening noise. They are not exactly here by choice and can't just get up and move. Thank you, Robin Reed



West University Neighborhood Association

P.O. Box 3336 Tucson, Arizona 85722

October 3 2012

The West University neighborhood is affected by DM jet noise and safety concerns as well as other area neighborhoods. Our neighborhood experiences loud flights at times and is near the U of A site of an Air Force jet crash that claimed two lives many years ago. High decibel noise affects the quality of life in residential neighborhoods and the OSB proposal will open the door to eventually bring in much louder aircraft, including the Osprey, Harrier and F-22 and possibly the F-35.

The West University Neighborhood Association (WUNA) does not support the OSB expansion proposal.

WUNA requests there be a full and objective Environmental Impact Statement (EIS)for Operation Snowbird. Our neighborhoods and tourism in the Tucson area are affected by high noise levels and safety concerns from aircraft. The OSB proposals will potentially double the number of flights allowed over the city. There needs to be a thorough economic analysis on what effect the OSB expansion proposal will have on neighborhoods, businesses, schools, new development and the economic engine of the region, tourism. And , with increased numbers of flights comes increased safety concerns.

WUNA requests that the Air Force find solutions for the OSB program that engages and protects the Tucson area residents, schools and businesses. This should include an EIS, possibly locating the OSB program to a less populated area and not enlarging the current OSB program and not allowing higher decibel aircraft to fly over primarily residential areas.

Chris Gans WUNA president

cgans232@msn.com 520-603-9783

Barrio Kroeger Lane Neighborhood Association c/o Margaret Ward President/Chairperson Margaret Ward [mjward75@hotmail.com] 870 W 19TH ST Tucson, Arizona 85745

October 4, 2012

ATTN: OSB EA COMMENT SUBMITTAL 355th Fighter Wing Public Affairs 3180 S. First Street Davis-Monthan AFB, AZ 85707

Via email at: 355WGPA@dm.af.mil

To whom it may concern,

Barrio Kroeger Lane Neighborhood Association joins with our sister neighborhoods in opposing any expansion of frequency or hours of Operation Snowbird military flight training over our city without an objective Environmental Impact Study.

We disagree with the Air Force's recent uneducated Finding of No Significant Impact (FONSAI) in its Environmental Assessment regarding military flights and any expansions. Over the last few decades, the Air Force has increased the military flights over Tucson without any studies or approvals and to the very obvious detriment to our municipal community. We citizens have complained and/or tolerated it. To propose that expanding what is already negatively impacting our health, safety, and noise pollution problems will not have an impact is clearly wrong. We believe that an unbiased Environmental Impact Study by an objective research group will show how we have been, are, and will be harmed by ongoing or expanded military flights over our municipal area.

This neighborhood is directly impacted because the designated flight path is contiguous to us and/or is close enough for us to hear the flights and see them, and because we travel, work, visit friends, shop, frequent entertainment and recreational areas, and attend classes under the designated flight path (which diagonally traverses the heart of Tucson's densely populated metropolitan area).

We also are connected or related to the nearby neighborhood residents east and south of us who are even more severely impacted than we are in their homes. Noise remediation to homes will not remedy the problem because people do not stay in their homes all day and night, especially in this wonderful outdoor climate. Our children play outside, we bicycle as commuters, we walk, we have rights to the quiet enjoyment of our properties, and rights to be safe from noise pollution, danger of accidents, and jet fume which pollutes our entire valley area.

The DMAFB as well as TIA-ANG also send their flights, very often, directly over our homes here in Barrio Kroeger Lane, regardless of any flight designations. The cumulative effects, along with the nearby traffic of 1-10, create an environmentally unhealthy area.

We also believe that the harassment of the noise and danger of the jets will negatively impact tourism, home values, and rental properties in this area that contains the upcoming urban rail-car, Rio Nuevo, and the bicycle/equestrian/pedestrian LOOP.

We, the residents of the Barrio Kroeger Lane Neighborhood Association have voted, therefore, to demand that an Environmental Impact Study be conducted before any further expansion of military flights and/or training be permitted over the Tucson area. We also ask that our City Council and County Board of Supervisors join in protecting the citizenry of this area from military air encroachment over our historic city.

Regards,

S:/Margaret Ward

Margaret Ward, President/Chairperson Barrio Kroeger Lane Neighborhood Association

Cc: Mayor and Council, City of Tucson Board of Supervisors, Pima County



BROADMOOR-BROADWAY VILLAGE NEIGHBORHOOD ASSOCIATION

October 4, 2012

<u>Sent Via Email</u> ATIN: OSB EA COMMENT SUBMITTAL 355th Fighter Wing Public Affairs 3180 S. First Street Davis-Monthan AFB, AZ 85707

To Whom It May Concern:

In response to the solicitation of comments regarding the Draft Environmental Assessment for the Proposed Update and Implementation of the National Guard Bureau Training Plan 60-1, in Support of Operation Snowbird at Davis-Monthan Air Force Base, the residents of the Broadmoor Broadway Village Neighborhood Association have significant concerns and questions.

The National Environmental Protection Act was passed in 1969 and signed into law on January 1, 1970. In 1975, "Operation Snowbird" was "officially" established at Davis-Monthan, to accommodate "snowbirds," from the Air National Guard, at times when inclement weather prohibited northeastern Air National Guard units from functioning. They were allowed to train at Davis-Monthan Air Force Base, "for two week periods basically between the months of January through April." (Wyle Laboratories Draft Preliminary Study Report Operation Snowbird Safety Procedures and Operational Study Services, 2010) In 1978, three years after OSB was established, there was an EA, with a Finding Of No Significant Impact (FONSI). Please keep in mind that in 1978, there was an accident with fatalities, involving a single-engine plane that crashed at Highland & 6th Street. Why the gap between 1975, when the program was initiated (it had actually started years earlier, in 1972, according to the Wyle Report), and 1978, when an EA was completed? From the beginning, OSB has not complied with NEPA:

An agency shall commence preparation of an environmental impact Statement as close as possible to the time the agency is developing or is presented with a proposal (Sec. 1508.23) so that preparation can be completed **in** time for the final statement to be included in any recommendation or report on the proposal. The statement shall be prepared early enough so that it can serve practically as an important contribution to the decision making process and will not be used to rationalize or justify decisions already made (Secs.1500.2(c), 1501.2, and 1502.2)."

(National Environmental Policy Act, sec. 1502.5 Timing.)

When was the NGB TP 60-1 initiated? Please provide its genesis, and supply all related documentation. **It** should have been included as a part of this draft, with particulars regarding exactly what changes are proposed in the wording. We don't find any record of an EA or EIS for NGB TP 60-1, which apparently was originally developed in 2011. How can members of the public effectively comment on the Training Plan when we have no access to it, even though it is repeatedly referenced in the DEA? We also need a copy of the proposed Annex C Addendum, the Ramp Management Plan (RMP), which is referenced in the DEA and should have been included, as required. "No material may be incorporated by reference unless it is reasonably available for inspection by potentially interested persons within the time allowed for comment." (Council on Environmental Quality "Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act" C.F.R. §1502.21) Please supply any and all addenda. We requested these documents during the scoping process.

Due to years of complaints from a Broadmoor resident, about the loud, excessively noisy aircraft over the city and concerns for public health and safety, written prior to a 1978 crash of an A-7 in Tucson, the Air Force sent a letter on behalf of President Carter, following the tragic crash and loss of lives, declaring a determination to improve conditions and allow only safer flights, Colonel Seminare, Jr. wrote a letter from the Office of the Secretary, Department of the Air Force, Washington, to Ms. Thompson, of the Broadmoor neighborhood:

"... the Air Force is extremely concerned about the safety of citizens near all Air Force bases. We are continually trying, through operational analyses and cooperative land use planning, to reduce the risk to the absolute minimum. A number of actions are currently being implemented or are being considered at Davis-Monthan in an effort to reduce the potential for a similar accident in the future:"

Colonel Seminare listed many actions, including the conversion from the single engine A-7 to the A-10, already underway, to be completed by mid 1979; work with the Federal Aviation Administration "to insure that air traffic in the Tucson Control Zone minimizes activity over the urban areas;" increase the "use of other airfields in the local area for practice instrument approaches;" conduct "more training at satellite fields;" and work with local government regarding 'compatible land use planning." Several potential actions under consideration were listed, such as construction of a parallel runway, which had "been submitted by Tactical Air Command for an out-year program," that would be contingent upon need, urgency, "competition with other Air Force facility needs," Congressional approval and funding; and also including:

-Reduce the Air National Guard activity at Davis-Monthan. We will explore the possibility of alternative sites and limiting the use of Davis-Monthan to Air National Guard aircraft that are similar to those stationed at Davis-Monthan and would be compatible with Davis-Monthan operations."

From 1978 until 2012, there was no additional EA for Operation Snowbird, despite enormous changes to mission and operations at DMAFB. Now, there is, finally, a Draft Environmental Assessment, with a false baseline date of 2009.

After numerous complaints, letters and petitions to Washington from Tucsonans, DMAFB requested an "Environmental Impact Analysis," due to the significant changes that bad occurred over time at the base. Apparently, that request was rejected (Wyle Laboratories Draft Preliminary Study Report Operation Snowbird Safety Procedures and Operational Study Services, 2010). At least now, after so many decades of violation of the National Environmental Protection Act (NEPA), the United States Air Force has prepared a DEA, which, under the circumstances, according to the contractor hired earlier (Wyle Study), would be the "most benign methodology for addressing the potential impacts of OSB." The purpose of the Wyle Study was "to mitigate on-going public concern over Snowbird operations. (Performance Work Statement for Operation Snowbird Safety Procedures and Operational Study Services, FA4877-09-R-0015)

The current Air Installation Compatible Use Zone Report for DMAFB, issued in February 1992, states, on page 6, of volume I: "Efforts are continually made to control and schedule missions to keep noise levels to a minimum, especially during the night. Flight paths have been selected with community disturbances and public reactions taken as one of the principal considerations." In the introduction to the current AICUZ: "This study is an update to the 1975 Davis-Monthan AFB Air Installation Compatible Use Zone (AICUZ) Study. It reaffirms the Air Force policy of promoting public health, safety and general welfare in areas surrounding Davis-Monthan AFB, Arizona. Page 6: "Efforts are continually made to control and schedule missions to keep noise levels to a minimum, especially during the night. Flight paths have been selected with community disturbances and public reactions taken as one of the principal considerations."

The current AICUZ also states:

"Recreation is a major land use within the Arroyo Chico Area Plan. Reid Park (the Zoo, Randolph Golf Course and the Recreation Center) comprises one of the largest and most complete regional parks in the Tucson urban area. In addition, there are three small neighborhood parks serving the residential areas in Arroyo Chico: Eastmoor, Parkview, and Country Club."

Further, in the AICUZ, we find:

"Well maintained aircraft and well trained aircrews do much to avoid aircraft accidents. However, despite the best training and maintenance, history makes it clear that accidents unfortunately do occur. It is imperative that flights be routed over sparsely populated areas as much as possible to reduce exposure to a potential accident. Aircraft noise is generated both in the air and on the ground. At Davis-Monthan AFB the following noise abatement and safety practices are undertaken:

Air Operations

1. Airfield departures and arrivals, to the maximum extent possible and consistent with established safety procedures, will use the airspace southeast of the base.

2. Traffic patterns will be designed to minimize overflights of populated areas.

3. Efforts are continually made to control and schedule missions to keep noise levels at an

absolute minimum during evening hours.

4. Operational areas for aircraft are over very sparsely populated areas.

5. Quiet hours for aircraft operations are normally from 10:30 P.M. to 6:00A.M. (2230 to 0600) unless a high priority mission or an emergency situation occurs."

The above AICUZ factors do not apply to what is experienced in Tucson today.

From the 1992 AICUZ, Volume II, among Air Force recommended policies regarding land use, is: "Policy#I: In order to promote the public health, safety, peace, comfort, convenience, and general welfare of those living within the airfield environs, it is necessary to:

- 1. Guide, control, and regulate future growth and development.
- 2. Promote orderly and appropriate use of land.
- 3. Protect the character and stability of existing land uses.
- 4. Prevent the impairment of the airfield and the public investment.
- 5. Enhance the quality of living in the areas affected.
- 6. Protect the general economic welfare by making developers aware of incompatible land use."

The 1992 AICUZ "is an update of the original AICUZ study dated August 1975." Volume I contains an introductory letter to the report, addressed to: "The Governments and Citizens of the Davis-Monthan AFB Environs," from Eugene D. Santarelli, Brigadier General, USAF, Commander at DMAFB. The reason given for the importance of appropriate land use planning when considering safety standards is "given that aircraft accidents do occur." That is why "the Air Force does not attempt to base its safety standards on accident probabilities." The statement is made that "an aircraft accident is a high consequence event and when a crash does occur, the result is often catastrophic." (Davis-Monthan Air Force Base February 1992 AIR INSTALLATION COMPATIBLE USE ZONE REPORT, VOLUME II, TO THE GOVERNMENTS AND CITIZENS OF THE TUCSON REGION)

NOISE, HEALTH AND SAFETY

After his retirement from the Air Force, as a consultant to the City ofTucson, General Santarelli cited data from the Air Force Safety Center regarding "Class A aircraft accident data" that "revalidated the USAF-developed concepts for a Clear Zone, Accident Potential Zone I, and Accident Potential Zone II. The data further revealed an aircraft mishap trend within the Approach Departure Corridor (ADC) along the line of flight beyond 40,000 feet. Although the likelihood of an occurrence is less than those within the AICUZ guidelines, it is more likely in this area than outside the ADC." (S'relli Consulting, LLC, Eugene D. Santarelli, "DAVIS-MONTHAN AFB *Detailed Talking Points,"* Gene Santarelli, 3 December 2003) He stated the following in a list of DMAFB Talking Points:

Because of the catastrophic consequences of an occurrence, community planning must put primary emphasis on the consequences of an accident rather than on the likelihood of the occurrence."

In the same report, General Santarelli points out the 2003 AJCUZ "noise corridors are primarily based upon A-10 data, the USAF's quietest fighter aircraft. Anticipated replacement (2010) is the F-35 Joint Strike Fighter, a much louder aircraft," and in reference to the Approach Departure Corridor, states: "-Additionally, noise factors in this region must be carefully considered." According to General Santarelli, the hypothetical noise contours, developed for the Joint Land Use Study, based on the F-16 aircraft, are more representative of the Joint Strike Fighter. He advises the City:

Planners should consider what these noise contours misleadingly define-a time weighted value that has no bearing on the peaks of the actual noise. For the community quality, prudent planners should act conservatively when making land use decisions."

The map on page 3-6 of the DEA shows noise contours that look very similar to those in the 1992 AICUZ for A-lOs, except they are no longer depicted as extending somewhat north of22nd Street and distinctly south of Valencia Road. We question: "Why?" Obviously, aircraft in use currently and those anticipated are considerably louder. Certainly, these contours don't take into account all relevant aircraft, including the possibility of the F-35, which has been identified in the EIS errata as perceived to be at least twice as loud. They don't even take into account the AICUZ contours for the A-10! The Approach-Departure Corridors are not included. Due to the numbers of sorties conducted on a routine basis, all year long, and complaints from throughout the metropolitan area, before doubling the numbers, actual measurements and thorough analysis should be required, including the "startle-effect" of sudden loudness and the impacts of afterburners and sonic booms.

More realistic, far broader contours are needed in order to assess noise and danger more accurately. The DEA leaves out many of the aircraft that fly over Tucson, yet have demonstrably poorer safety records and more crashes than the A-10. Extensive data regarding all aircraft involved at D-M and TIA, including unmanned, should be comprehensively included in a detailed EIS. Aircraft in formations and flying in tandem create what for lots of people constitutes more noise. This is not considered in the DEA and should be. For years, citizens of Tucson have requested objective, independent scientific measurements, data and analysis of sound, to include the effects of peak sound exposure levels.

The consensus recommendation from the MC3 Final Report states, in Recommendation 3B:

The MC3 recommends that a program for monitoring aircraft noise be designed and implemented by a qualified, impartial, peer-reviewed body with experience in acoustical measurement. Data will be publicly available to assist in short and long-term decision making."

This recommendation, "**3B Establish a noise management program**," was based upon their finding of fact:

There is insufficient data to adequately assess the impact of aircraft noise on the Tucson metropolitan area. In addition, accurate noise data are needed to assess any potential health effects of aircraft noise and to inform local governments relative to future land-use planning, provision of community services, neighborhood reinvestment and noise attenuation decisions."

As stated, in the Wyle report: "There remains a need for a new AICUZ." One of the recommendations from Wyle is:

2. Air Force contract for a new AICUZ, the prevailing AICUZ, dated 1992, does not reflect the current level of operations. A new AICUZ would reevaluate aircraft noise and accident potential related to U.S. Air Force flying operations at Davis-Monthan AFB."

On page 3-20 of the DEA, is the statement: "All aircraft participating in OSB follow established DMAFB flight rules and overhead patterns in accordance with the published AICUZ." **The statement is not true.** If the flight operations and mission will be changed, the AICUZ could apply. Otherwise, there exists an incongruous mismatch of gigantic proportions.

Through decades, we have experienced the substantial, cumulative effects of Operation Snowbird increases in numbers of aircraft, levels of noise and other pollution, homs of flights, days of operation, lower flying aircraft, property damages, expansions of mission, numbers of foreign pilots and foreign aircraft, with no Environmental Assessment or Environmental Impact Statement, as required by the National Environmental Protection Act. Instead of two-week periods, between January and April, training is year round, with recruiting/marketing efforts to bring more. Most arrivals routinely use the airspace northwest of the base, over the most densely populated parts of the city. Numerous departures are to the northwest too.

The Military Community Compatibility Committee (MC3) was an ad hoc committee that included members from Davis-Monthan, the City of Tucson, Pima County and the community, all with voting privileges, which was "formed to generate solutions to minimize current and future military aircraft noise impacts on residential neighborhoods and local businesses, while maintaining the long-term viability ofDavis-Monthan Air Force Base (DMAFB)." Planning, facilitation and consultation were provided through the U.S. Institute for Environmental Conflict Resolution. After nineteen months of study, the MC3 Committee reached consensus on a number of recommendations, including the establishment of a Military Community Relations Committee (MCRC). In response to "DMAFB Flight Operations concerns raised by the public," the August 2006 MC3 Final Report contains the following information:

The A-10 has flown from DMAFB since 1976. In the last 30 years, there have been 15 Class-A Mishaps involving DMAFB A-IO's. A "Class-A Mishap" is any mishap which results in: 1) a direct mishap cost totaling \$1 million or more, 2) a fatality or permanent total disability, or 3) the destruction of a Department of Defense (DoD) aircraft. Example: A ground incident that results in damage to an F-16 engine could be classified as a Class-A Mishap based on cost alone as each engine can cost over \$1M. The crash of a T-37 costing \$450,000 would be classified as a Class-A Mishap not for cost, but because of the destruction of an aircraft. Generally, most Class-A Mishaps are the result of an aircraft malfunction where the aircrew positions the aircraft over an unpopulated area where they can safely eject and the aircraft crash into the ground without damage to structures or loss of life." (MC3 Final Report: Consensus Recommendations, August 2006)

We are interested in full disclosure and analyses of all mishaps involving all aircraft sorties at DMAFB and TIA, including Class-Band Class-C mishap data, and not solely limited to A-10 mishaps. This information should be contained in an EIS.

The extensive increase in the number of sorties causes significant concerns. We realize that these are not actual traffic counts, so that, for example a takeoff *and* landing, plus all of the overhead traffic patterns and multiple approaches are counted solely as *one* sortie.

Traffic count is a tally of every takeoff and every landing made by every aircraft conducing [sp] approaches/landing at DMAFB. A transient aircraft which stops for gas and departs would conduct one landing then one takeoff thus a traffic count of two (2) would be registered. Local aircraft flying multiple practice approaches would register 2 for each takeoff and low approach/landing they perform. Example: An A-10 conducting currency/proficiency training performs two straight-in approaches to a low-approach followed by 3 overhead pattern approaches with the last being to a full stop. The tower controllers would register a traffic count of 10 for that aircraft. Similarly, if an Arizona *Air* National Guard F-16 based out of Tucson International Airport (TIA) conducts 3 practice approaches into DMAFB. The tower controllers would register a traffic count of 6." (MC3 – OM Questions 31 Oct 05DMAFB Responses 24 Feb 06pages 40-41)

A graph was supplied, depicting the traffic count at DMAFB from 1998 through 2005. For that time period: "The traffic count at DMAFB with the exception of 2002 & 2003 has been greater than 67, 400 every year." (MC3 – DM Questions 31 Oct 05; DMAFB Responses 24 Feb 06). The projection for the end of 2005 was 76, 044, based upon the monthly averages. The decreases in 2002 (46,275) and 2003 (48,666) were "directly correlated to the aftermath of 9/11" and deployment "in support of the Global War on Terrorism (GWOT)."

Any proposed further expansion in sorties from what we are told was "the 2009 level of 1,190" would greatly magnify the noise, safety and health risks incurred. Currency and proficiency requirements have to be met annually and used to take place utilizing auxiliary airfields. Especially with far noisier, single-engine, single-pilot aircraft, the perceived disruptions and loudness levels could seem incessant and deleterious to good quality of life, with extremely negative impacts to our human and natural environment, health, safety, welfare, properties and the metropolitan economy. We question why the year 2009 was selected and ask what the Number of sorties is currently, in 2012? To consider the proposed number of2,256 sorties, just for Operation Snowbird, constituting only "approximately 7 percent of the total number of sorties flown out of DMAFB" strikes many Tucsonans as unreasonable and intolerable.

The Wyle report states: "As shown in the noise data spreadsheet, there has been little to no consistency in collecting operations data each year (i.e. complete data gaps for 1978, 1979, 1980, 1981, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1992, 1993, 1996, 1999, and 1999)." This is very disturbing.

According to the Environmental Protection Agency:

"The traditional definition of noise is 'unwanted or disturbing sound.' Sound becomes Unwanted when it either interferes with normal activities such as sleeping, conversation, or disrupts or diminishes one's quality of life." (http://www.epa.gov/air/noise.html)

"Studies have shown that there are direct links between noise and health. Problems related to noise include stress related illnesses, high blood pressure, speech interference, hearing loss, sleep disruption and lost productivity. Noise Induced Hearing Loss (NIHL) is the most common and often discussed health effect, but research has shown that exposure to constant or high levels of noise can cause countless adverse health effects." (http://www.epa.gov/air/noise.htm.)

The DMAFB AICUZ describes the "extensive data collection process" and the "detailed information {that} is gathered on the flight tracks flown by each type of aircraft assigned on the base and the number and time of day of flight on each of these tracks during a 'typical ' day. This information is used in conjunction with the single event noise descriptor to produce Ldn values. These values are combined on an energy summation basis to provide single Ldn values for the mix of aircraft operations at the base. Equal value points are connected to form the contour lines.

NOISE EVENT DESCRIPTOR''

The single event noise descriptor used in the Ldn system is the Sound Exposure Level (SEL). The SEL measure is an integration of the "A" weighted noise level over the period of a single event such as an aircraft flyover, in decibels (dB). Frequency, magnitude, and duration vary according to aircraft type, engine type, and power setting. Therefore, individual aircraft noise data are collected for various types of aircraft/engines at different power settings and phases of flight."

Complete, comprehensive data should be included in an EA though apparently much of this data doesn't exist. If non-existent, that would preclude full, scientific evaluation and legal compliance.

As pointed out in the Davis-Monthan AICUZ, page B-6, in Volume II:

d. The flight characteristics, aircraft mix, and type of operations at military installations differ significantly from commercial air carrier and general aviation airports. Potential damage to people and structures on the ground from crashes of heavy bombers, high speed ftghters, and fuel laden tankers is greater than general aviation or commercial air carrier operations."

We need in-depth analyses of the cumulative effects to residents, businesses and visitors within the high density areas in close proximity to the Base, which include numerous single family residences, multi-family complexes, condos, dormitories, student housing; businesses, warehouses, industrial buildings; pre-schools, elementary, middle and high schools; colleges and universities; parks, outdoor sports fields, county fairgrounds, and stadiums, arenas, public gardens, outdoor music shell, amphitheater, zoo; child care facilities; hotels, bed and breakfasts, restaurants; museums, shopping centers, theaters, libraries; temple, synagogues, churches, and mosque; hospitals, medical complexes, residential care facilities, clinics; concert halls, neighborhood centers, a community center with arena, exhibition hall and music hall; police and fire departments; prison complex and the recent major Pima emergency Communications Center, that is "partially" in the Accident Potential Zone, PCWIN (Pima County Wireless Integrated Network and hundreds of acres of planned new developments, some under construction).

Still further, major expansion of Operation Snowbird would significantly impact the metropolitan area of Tucson. We have numerous concerns about continually adding pollution of all kinds and single-engine, single-pilot aircraft, including live ordnance in the airspace. Already we experience consistently more air traftic, with all of the missions and agencies currently at Davis-Monthan, and the ones being proposed. Now, we are faced with the prospect of a substantial increase in night flights. An EIS is needed.

The Operation Snowbird aircraft fly over densely populated urban areas. We have legitimate, serious concerns that have not been aptly addressed in this DEA. Information contained in it is insufficient and frequently inauthentic. The DEA lacks necessary data, documentation, proper analyses and viable alternatives. We need additional specifics regarding the significant negative impacts to the environment, public health and safety that this dramatic increase in mission would bring.

After citing the hard facts, a recommendation from Wyle was: "A new EA would re-establish the baseline of activities and provide a more realistic view of impacts associated with Operation Snowbird operations." Clearly this EA is lacking realistic assessment, and could be viewed as a way to further elude responsibility. Wyle also related the use of Categorical Exclusions, but since there weren't any on record for Davis-Monthan, determined an EA to be the "most benign" approach. "Because there is no CATEX to address OSB, use of an EA is the most benign methodology for addressing the potential impacts ofOSB." (Wyle)

In the Draft Finding ofNo Significant Impact is the statement: "No construction would be required to update and implement TP 60-1." ("FONSI -1") D-M published a separate DEA, in January of this year, although there is no reference to it in the DEA for OSB, which covers the period of2012-2014. Included in the document are references to construction and renovations related to Operation Snowbird. It cites the Environmental Restoration Program at D-M. and the "6200 tons of solid waste, which may include hazardous waste in the form of asbestos and lead-based paints" and also states: "A waiver would also be obtained for the HAMS yard project and road and parking area improvements in closed ranges due to the potential for buried munitions." Any public notification was extremely minimal, confined to the public notice section of the Arizona Daily Star. As far as we know, there were no members of the public included in any notification process or provided any opportunity for participation in the DEA, or given notice of

the FONSI or opportunity to comment on it. **It** contains CATEX and a FONSI. The Final EA/FONSI, issued May 17, 2012, was already "updated" May 24, 2012.

It seems the word "water" only appears three times in the current DEA, twice under "5.32 Irreversible and Irretrievable Commitment of Resources," and once under 3.0 AFFECTED ENVIRONMENT." Davis-Monthan is a Superfund site. The DEA contains absolutely no data or analysis of the short and long-term effects to our water. This is of utmost importance and deserves comprehensive analysis. Understandably, we are concerned about detrimental consequences to groundwater, washes and floodplains on base and impacts downstream in our neighborhoods.

Multiple other major projects and construction activities, requiring compliance with NEPA and environmental laws, located in the vicinity ofDavis-Monthan, are not cited in connection with this DEA, including Tucson International Airport construction, expansion, renovations and new runway; Puerto Nuevo (Port of Tucson); Tucson Tech Corridor and University of Arizona Science and Technology Parks; Alvemon Way/Swan Road Realignment Study, Proposed Southline Transmission Line Project EIS and the U.S. Bureau of Land Management; Old Vail Connection Road Study, Raytheon Missile Systems, The Bridges, PCWIN and proposed aerospace parks.

> "1. Indicate any public environmental assessments and other environmental impact statements which are being or will be prepared that are related to but are not part of the scope of the impact statement under consideration." (CEQ NEPA Regulations, 40 C.F.R. § 1501.7(a)(5))

FURTHER ENCROACHMENT OF DMAFB

The DEA is misleading because the focus, though clouded and distorted, is on land use and impacts northwest of the Base. To the northeast is encroachment too. Neglecting to assess the southeast and southwest could perhaps leave open to misinterpretation or assumption that these areas are largely undeveloped or low density. This is inaccurate. Vast acreage is developed already, and these areas are projected for continued massive growth. There is considerable State Trust land, as well as private and federal. On page 3-1 of the DEA, following a brief description of the region of influence (ROI), analysis of resources in the environmental impact process (EIAP) and "the expected geographic scope of potential impacts" in the ROI, which is defined as "the area immediately surrounding DMAFB and Pima County, is the statement:

Since no construction or other ground disturbance is included as part of the Proposed Action or alternatives and no increase in operational support staff is anticipated, impacts on cultural and natural resources, water quality and supply, soils and geology, land use, and public services are not expected and, thus, will not be discussed further."

The DEA fails to include major transportation corridors, planned and ongoing major construction and burgeoning developments. Years ago, in his paper titled "DAVIS-MONTI-IAN AFB Detailed Talking Points, General Santarelli (retired), in his capacity as consultant to the City of

Tucson, and Manager of S'relli Consulting, LLC, listed concerns under the heading: **PRESENT ISSUES (Encroachment).** He describes the Approach Departure Corridor (ADC) as defined in Arizona State law (2,850 acres) and the City of Tucson's Airport Environs Zone (6,000 acres) from 30,000 feet out to 50,000 feet, beyond the Clear Zones and Accident Potential Zones, and states: "-D-M Commanders have consistently indicated the DPD AICUZ is inadequate and land use restrictions are needed throughout the 50,000 foot paddle." General Santarelli notes:

University of Arizona Science and Technology Park

--1,345 acre Park located southeast of Davis-Monthan AFB.
About 345 acres developed and 1,000 acres for future Expansion
--Most of Park within the D-M Vicinity Box; Approx 'li within the 65 dnl noise contour"

Although the General stated that the "Base recommended the Park not develop a hotel with conference center within the Arrival & Departure Corridor," those are still part of the plans to date. On the next page of the Talking Points, is noted:

"--Base officials, over the years, have consistently expressed safety and noise concerns throughout this 50,000 foot area."

Included in the same paper is information from the Air Force Safety Center regarding Class A accident data that reiterated the validity of maintaining a Clear Zone, Accident Potential Zone I, and Accident Potential Zone II. "The data further revealed an aircraft mishap trend within the Approach Departure Corridor (ADC) along the line of flight beyond 40,000 feet. Although the likelihood of an occurrence is less than those within the AICUZ guidelines, it is more likely in this area than outside the ADC.

--Because of the catastrophic consequences of an occurrence, community planning must put primary emphasis on the consequences of an accident rather than on the likelihood of the occurrence."

General Santarelli cautioned: "This area supports 100% of the O-M live ordnance departures. The risk that is preventable now and avoidable for the foreseeable future.

--High performance aircraft characteristics, similar to those expected in D-M's future show a definite area of risk out to approximately six miles, from the end of the runway, regardless of time of year and aircraft load configuration. During high temperature periods, (spring-summer-early fall), and with forecast aircraft training load configurations, this area of risk extends out to 50,000 feet, year round. (Approximately 600 sorties per year, today; projected to grow to at least 800 sorties per year through this decade)

Additionally, noise factors in this region must be carefully considered. 2003 Air Installation Compatibility Use Zone (AICUZ) noise contours are primarily based upon A-10 data, the USAF's quietest fighter aircraft. Anticipated replacement (2010) is the F-35 Joint Strike Fighter, a much louder aircraft. Consequently, as a prudent, land use planning measure is to adopt the hypothetical noise contours, currently under consideration by the City of Tucson. These contours are based on the F-16 aircraft, more representative of the JSF. Planners should consider what these noise contours misleadingly defme-a time weighted value that has no bearing on the peaks of the actual noise. For the community quality, prudent planners should act conservatively when making lank [sp] use decisions."

General Santarelli points out that most likely D-M would be absorbing more missions in the future, and asserts that planning has to be appropriate. "increased activity will bring an increased level of noise and risk."

He also states:

The current daytime- vs- night flying is approximately 60% day and 40% night. In the future not only will the number of daily flight operations likely increase by over 100%, but the day-night mix will also move closer to 50150.''

No 2003 AICUZ has been made available to the public, despite numerous requests. We have been told repeatedly that the 1992 AICUZ is the official document on file with the FAA. Also, we have not been able to fmd an EA/EIS for Operation Noble Eagle. Though it is under the Air National Guard, there is no mention of it in the DEA. F-16, on national defense alert, take off and climb to the northwest, using afterburners and carrying live ordnance, at any time of the day or night as directed by the National Command Authority.

In the 1992 AICUZ, the "mutually beneficial arrangement" between DMAFB and Tucson International Airport (TIA) is described, with the close coordination that exists since TIA's main runway is parallel to D-M's and only 4.5 miles southwest. "Due to the closeness of the two major airports and the heavy use of the airspace, the base and TIA closely coordinate daily traffic routing."

Are the sorties involving ANG from TIA included in the count for this DEA? Are sorties of foreign pilots estimated in the DEA? We know that typically, in the past, these were not included in the number of sorties for D-M, and neither were transit aircraft, which is why the traffic counts would provide a far better gauge of impacts.

There's a dearth of data and assessment under crucial categories: 3.3 Socioeconomics and Environmental Justice; 3.3,1.2 Education; 3.3.3 Community Cohesion; 3.3.4.3 Environmental Justice and Conditions; 3.3.5 Executive Order 13045, Protection of Children. The area considered as the "impact footprint for noise" is entirely too small for a reasonable and prudent analysis in each significant area of impact, causing distortions of facts. Simple generalizations lead to illogical conclusions, inadequate rationalizations/justifications and early dismissal. The result is an ill conceived FONSI. Even within the miniature "footprint," there is not enough accurate documentation, warranted detail and thorough analysis.

In the areas of environmental non-attainment and legal non-compliance, it is acknowledged that

there will be <u>further</u> disproportionate impact, though these consequences are merely stated and dismissed, as if of no compelling concern, even taking into account the thousands of people who would be adversely affected by "noise levels greater than 65 dBA DNL who are currently not exposed to noise at these levels," if the F-35 aircraft would be added to the ANG mission. The "8,500" number cited in the DEA is contained in the EIS for basing of the F-35 at TIA, and does not include the people who would be impacted by the necessary landings and takeoffs at DMAFB for fuel and live ordnance, which would obviously increase the number dramatically, or the estimated further impact upon those already in 65 dBA DNL and 70 dBA DNL areas. Throughout the DEA, we see a rush to judgment in favor of the Responsible Agency.

Acknowledgement of the facts provides no justification for further compounding and exacerbating problems by proceeding with additional, objectionable actions, particularly following decades of violations and cumulative impacts that brought us to where we are today.

- (f) Agencies shall not commit resources prejudicing selection of alternatives before making a final decision (Sec. 1506.1).
- (g) Environmental impact statements shall serve as the means of assessing the environmental impact of proposed agency actions, rather than justifying decisions already made."

(CEQ NEPA Regulations, 40 C.F.R. § 1502.2

We request an Environmental Impact Statement, with interdisciplinary involvement that could include the Council on Environmental Quality, Federal Aviation Administration, Environmental Protection Agency, Bureau of Land Management, U.S. Fish & Wildlife Service and Federal Highway Administration. In addition to NEPA, we would appreciate ample consideration of the Environmental Quality Improvement Act, Clean Air Act, Clean Water Act, Endangered Species Act, Fish and Wildlife Coordination Act and the Quiet Communities Act.

Considering promises made by the Air Force to Tucsonans, the obviously inaccurate baseline for the DEA, the substantial changes in the mission of Operation Snowbird, the enormous gaps in Environmental Assessments/Environmental Impact Statements to comply with NEPA, the failures to adhere to the 1992 AICUZ, the significant impacts upon children and adults, domestic animals and wildlife, businesses, properties, institutions and industries, resulting from decades of non-compliance in <u>all</u> areas affecting our environmental Impact Statement, with oversight and involvement by the Council on Environmental Quality, that adequately addresses our relevant, priority concerns and complies with executive orders and federal statutes.

Thank you for your attention to these significant issues.

Sincerely,

Broadmoor Broadway Village Neighborhood Association



Supporting The Airmen Who Protect Our Freedom

September 12, 2012

355th Fighter Wing Public Affairs Office Attn: ACC/A7P 3180 S. First Street Davis-Monthan AFB, AZ 85707

Dear Sirs:

I am writing on behalf of the DM-50 to express our support for the FONSI conclusion of the draft Environmental Assessment of the enhanced mission for "Operation Snowbird" (OSB EA) released in July 2012. Furthermore, while we understand and agree with the Air Force intent, the analytical analysis used to establish the preliminary "Finding of No Significant Impact" could be improved.

The DM-50 suggests that the Air Force enhance the Draft Report to include expanded explanations of the apparent intention to return OSB operations to nearly its highest historical level of sorties; the aircraft types, numbers, and methodology used for noise analysis; a copy of the referenced 2007 noise study used as a basis of this report; and an explanation of the methodology used for the safety analysis in the Report.

The DM50 is proud to support Davis-Monthan AFB, its Airmen, families and its tenant units like the 162nd Fighter Wing's "Operations Snowbird". The greater Tucson population equally recognizes the significant contributions that DM, its tenants and the 162nd FW bring to our community; nearing \$2B/yr economically. The synergy between Tucson, DM and all of its missions enhance our city's growth while ensuring our national security in these troubled times. Respectfully,

Michael Grassinger President, DM50

CC: Gen Hostage, ACC/CC Lt Gen Rand, 12AF/CC Col Blanchard, 355 FW/CC Col McGuire, 162 FW/CC

> 6057 East Grant Road Tucson, Arizona 85712 www.dm50.org

OPINION » GUEST COMMENTARY

0

August 16, 2012

<u>Share</u>

Guest Opinion The Air Force's draft assessment of its plan to expand Davis-Monthan's Operation Snowbird is stunningly deficient

Tweet

by <u>Robin Gomez</u>

The Air Force has just released the draft environmental assessment of its plan to expand the National Air Guard training program that brings U.S. and foreign jets to Tucson. It is asking for public comments by Sept. 14. Unfortunately, the Air Force has refused to hold public meetings.

The expansion of Operation Snowbird, based at Davis-Monthan Air Force Base, would increase the number of flights from 1,190 to 2,256 a year. Night training flights would be allowed. Strangely, the assessment (which can be found in PDF form at www.dm.af.mil/shared/media/document/AFD-120730-035.pdf) concludes that the expansion will have no significant impact on the surrounding community.

The fundamental deficiency of the assessment is its failure to explain how the total number of Operation Snowbird flights can be almost doubled and yet have no significant effect on the surrounding human environment. Residents who live under the current Snowbird flight paths, as well as simple common sense, tell us this can't be true.

The answer lies in the selectivity and presentation of data in the assessment. For example, it notes that under the current program, a disproportionate number of minority/low-income populations adjacent to the base on the northwest are already seriously affected by noise. This involves some 826 homes and 134 multifamily complexes. The Federal Aviation Administration and the Air Force both consider such areas as "incompatible with residential use." The assessment then says that an expanded Operation Snowbird will add only 20 more homes to the impacted area. It, therefore, concludes that the noise effect from the expansion will be slight. There is no discussion of the effects of doubling the number of flights on this already impacted group of residents. Also, the expansion appears to run counter to economic-justice legislation, yet that is not discussed in the draft environmental assessment.

The assessment seriously understates the number of residents impacted by noise. There is no discussion of Operation Snowbird flight patterns over the city, which involve two half-circles, several miles apart, over residential neighborhoods northwest of D-M. For example, a noise chart prepared by D-M for the Military Community Relations Committee shows that an F-18 or a Harrier approaching D-M over the Broadmoor-Broadway Village neighborhood (left out of the assessment) will be four times louder than an A-10. To claim, as the assessment does, that this aircraft noise will be "insignificant" is simply not credible.

The assessment's noise analysis leaves out the noisiest Snowbird aircraft: the F-18s, Harriers and F-22s. It is based on a 2007 noise study which the public has never seen.

The safety analysis is based on a table developed by D–M listing the risk factors for Operation Snowbird aircraft. Neither the methodology nor the calculations are provided for public review. It is not evident that the risk factor captures the full picture of the aircraft-safety record. The table also leaves out data on the F–18. One crashed three years ago in a San Diego neighborhood, killing four; another crashed recently into an apartment complex in Virginia Beach, Va. Both the Osprey and F–22 are also left out. An Osprey crashed in Marana in 2000, killing 19 Marines, and F–22 pilots have refused to fly for safety reasons. The only foreign aircraft included is the Tornado, leaving out data on the Mirage, Typhoon, Kfir and Rafale.

The economic analysis is given short shrift. Tucson's premier economic engine is tourism. The assessment notes that there was concern expressed at public meetings about the effect on tourism of an expanded Operation Snowbird. However, the assessment states the costs would be difficult to quantify, so it simply ignores the issue. It then draws the completely unsupported conclusion that the expanded Snowbird program would have negligible adverse impacts.

Contrary to the assessment, expanding air operations over densely populated urban Tucson will impact large numbers of residents in terms of safety, noise and social justice. It will also impede future development, as well as the quality of life needed to attract high-tech, bioscience businesses to the city.

Please write the Air Force before Sept. 14 and request a full, objective environmental impact statement. The address is: Attn: OSB EA Comment Submittal, 355th Fighter Wing Public Affairs, 3180 S. First St., Davis-Monthan

AFB, AZ 85707.

Robin Gomez is a member of Tucson Forward Inc.

Guest Commentary archives »

Like	Send	One like. Sign Up to see what your friends like.	1 Tweet	0	3			
Facebook Recommendations								

Sign Up Create an account or log in to see what your friends are recommending.

Facebook social plugin

OPINION » GUEST COMMENTARY

0

August 16, 2012

<u>Share</u>

Guest Opinion The Air Force's draft assessment of its plan to expand Davis-Monthan's Operation Snowbird is stunningly deficient

Tweet

by <u>Robin Gomez</u>

The Air Force has just released the draft environmental assessment of its plan to expand the National Air Guard training program that brings U.S. and foreign jets to Tucson. It is asking for public comments by Sept. 14. Unfortunately, the Air Force has refused to hold public meetings.

The expansion of Operation Snowbird, based at Davis-Monthan Air Force Base, would increase the number of flights from 1,190 to 2,256 a year. Night training flights would be allowed. Strangely, the assessment (which can be found in PDF form at www.dm.af.mil/shared/media/document/AFD-120730-035.pdf) concludes that the expansion will have no significant impact on the surrounding community.

The fundamental deficiency of the assessment is its failure to explain how the total number of Operation Snowbird flights can be almost doubled and yet have no significant effect on the surrounding human environment. Residents who live under the current Snowbird flight paths, as well as simple common sense, tell us this can't be true.

The answer lies in the selectivity and presentation of data in the assessment. For example, it notes that under the current program, a disproportionate number of minority/low-income populations adjacent to the base on the northwest are already seriously affected by noise. This involves some 826 homes and 134 multifamily complexes. The Federal Aviation Administration and the Air Force both consider such areas as "incompatible with residential use." The assessment then says that an expanded Operation Snowbird will add only 20 more homes to the impacted area. It, therefore, concludes that the noise effect from the expansion will be slight. There is no discussion of the effects of doubling the number of flights on this already impacted group of residents. Also, the expansion appears to run counter to economic-justice legislation, yet that is not discussed in the draft environmental assessment.

The assessment seriously understates the number of residents impacted by noise. There is no discussion of Operation Snowbird flight patterns over the city, which involve two half-circles, several miles apart, over residential neighborhoods northwest of D-M. For example, a noise chart prepared by D-M for the Military Community Relations Committee shows that an F-18 or a Harrier approaching D-M over the Broadmoor-Broadway Village neighborhood (left out of the assessment) will be four times louder than an A-10. To claim, as the assessment does, that this aircraft noise will be "insignificant" is simply not credible.

The assessment's noise analysis leaves out the noisiest Snowbird aircraft: the F-18s, Harriers and F-22s. It is based on a 2007 noise study which the public has never seen.

The safety analysis is based on a table developed by D–M listing the risk factors for Operation Snowbird aircraft. Neither the methodology nor the calculations are provided for public review. It is not evident that the risk factor captures the full picture of the aircraft-safety record. The table also leaves out data on the F–18. One crashed three years ago in a San Diego neighborhood, killing four; another crashed recently into an apartment complex in Virginia Beach, Va. Both the Osprey and F–22 are also left out. An Osprey crashed in Marana in 2000, killing 19 Marines, and F–22 pilots have refused to fly for safety reasons. The only foreign aircraft included is the Tornado, leaving out data on the Mirage, Typhoon, Kfir and Rafale.

The economic analysis is given short shrift. Tucson's premier economic engine is tourism. The assessment notes that there was concern expressed at public meetings about the effect on tourism of an expanded Operation Snowbird. However, the assessment states the costs would be difficult to quantify, so it simply ignores the issue. It then draws the completely unsupported conclusion that the expanded Snowbird program would have negligible adverse impacts.

Contrary to the assessment, expanding air operations over densely populated urban Tucson will impact large numbers of residents in terms of safety, noise and social justice. It will also impede future development, as well as the quality of life needed to attract high-tech, bioscience businesses to the city.

Please write the Air Force before Sept. 14 and request a full, objective environmental impact statement. The address is: Attn: OSB EA Comment Submittal, 355th Fighter Wing Public Affairs, 3180 S. First St., Davis-Monthan

AFB, AZ 85707.

Robin Gomez is a member of Tucson Forward Inc.

Guest Commentary archives »

Like	Send	One like. Sign Up to see what your friends like.	1 Tweet	0	3			
Facebook Recommendations								

Sign Up Create an account or log in to see what your friends are recommending.

Facebook social plugin

Law Offices of Williamson & Young, PC

Kathleen G. Williamson, J.D., Ph.D., LL.M. S. Jonathan Y oung,, Esq.

Licensed in New York and Arizona State Board Certified Criminal Law

PO Box 249 Tucson, Arizona <u>85702-0249</u> <u>williamson@williamsonandyoung.com</u> (520) 623-8414 (Arizona) / (212) 537-6684 (NY) Fax (212)537-6683

October 4, 2012

ATTN: OSB EA COMMENT SUBMITTAL 355th Fighter Wing Public Affairs 3180 S. First Street Davis-Monthan AFB, AZ 85707

Via email at: 355WGPA@dm.af.mil

To whom it may concern,

This Tucson business corporation hereby submits its opposition to any expansion of frequency or hours of Operation Snowbird military flight training over our city. We demand an objective Environmental Impact Study.

The Air Force's recent uneducated Finding of No Significant Impact (FONSAI) in its Environmental Assessment regarding military flights and any expansions is ludicrous and reckless. Over the last few decades, the Air Force has increased the military flights over Tucson without any studies or approvals and to the very obvious detriment to our municipal community. We who work under the flight path live in a virtual war zone which would otherwise be a beautiful, calm, temperate, attractive business community, but for the military jet fumes polluting our air, the ubiquitous danger of an accident, the noise that violates us at all kinds of hours and levels, and the scientifically proven negative impact living under such flights causes to our health. Our office has complained to the DMAFB complaint line for many years. Many times a day, we cannot hear what is being spoken in the room or on the telephone because of an A10, Harrier, or other military jet screaming at our zenith. After many years and phone calls at our own expense in time, we gave up on the telephone complaint line, as it seems to have no effect whatsoever. Our calls have been under-reported and ignored.

An unbiased Environmental Impact Study by an objective research group will show how we have been, are, and will be harmed by ongoing or expanded military flights over our municipal area.

We also believe that the harassment of the noise and danger of the jets will negatively impact business, tourism, home values, and rental properties in this area which contains historic central neighborhoods and university housing, as well as proximity to the developing renewed downtown area. These ultimately will have a detrimental effect on our business and client base.

You should be advised that this business is a voting member of Tucson's DMAFB Military Relations & Citizens Committee. That committee was unable to reach a consensus on sending a letter to the Air Force regarding the current Environmental Assessment (which contains a FONSI) because a minority of business members objected to the majority; that majority consisted of mostly Neighborhood Associations representing many people and demanded a full, objective Environmental Assessment. Our law office joined with that majority, demanding a full EIS.

Kindest regards, WILLIAMSON AND YOUNG, P.C.

> <u>_s:/Kathleen G. Williamson</u> Kathleen G. Williamson, Esq.

Tucson Forward, Inc. P. O. Box 42472 Tucson, AZ 85733-2472. info@TucsonForward.com

Arizona Center for Law in the Public Interest 2205 E. Speedway Blvd. Tucson, AZ 85719 jherrcardillo@aclpi.org

October 4, 2012

<u>VIA U.S. MAIL AND ELECTRONIC MAIL</u> ATTN: OSB EA COMMENT SUBMITTAL 355th Fighter Wing Public Affairs 3180 S. First Street Davis-Monthan AFB, AZ 85707

Re: Environmental Assessment for the Proposed Update and Implementation of the National Guard Bureau Training Plan 60-1 in Support of Operation Snowbird Davis-Monthan Air Force Base, Arizona.

To Whom it May Concern:

This letter represents the response to the solicitation of comments on the draft Environmental Assessment for the Proposed Update and Implementation of the National Guard Bureau Training Plan 60-1 in Support of Operation Snowbird Davis-Monthan Air Force Base, Arizona ("EA") from Tucson Forward, Inc. ("Tucson Forward") and the Arizona Center for Law in the Public Interest ("Center").

Tucson Forward is a non-profit organization that aims to protect Tucson and its neighborhoods from health damaging noise and safety concerns related to OSB. Our goal is to foster economic, scientific and technological development of Tucson in a way that supports and promotes a good quality of life for all its citizens. The communities we represent would be affected in a number of ways if the proposed expansion of the OSB program is implemented.

The Center is a nonprofit law firm dedicated to ensuring government accountability and protecting the legal rights of Arizonans. It frequently works with community groups that are concerned about the environmental impacts of proposed government projects or actions, and assists them in navigating the NEPA process.

Both of our organizations believe that the EA prepared by the Air Force is incomplete and inadequate and fails, utterly, to support the Finding of No Significant Impact ("FONSI"). For the reasons set forth below, we urge the Air Force to rescind the FONSI and prepare a full Environmental Impact Statement, as the law requires.

I. Introduction/General Overview of Law:

The National Environmental Policy Act ("NEPA") has 'twin aims. First, it places upon [a federal] agency the obligation to consider every significant aspect of the environmental impact of a proposed action. Second, it ensures that the agency will inform the public that it has indeed considered environmental concerns in its decisionmaking process." *Kern Bureau of Land Mgmt.*, 284 F.3d 1062, 1066 (9th Cir. 2002)(quoting *Baltimore Gas & Elec. Co. v. Natural Res. Def. Council, Inc.*, 462 U.S. 87, 97 (1983)). NEPA is not substantive. It does not require that agencies adopt the most environmentally friendly course of action. *Kern*, 284 F.3d at 1066. Rather, "[t]he sweeping policy goals . . . of NEPA are . . . realized through a set of 'action-forcing' procedures that require that agencies take a 'hard look at environmental consequences.' "*Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1989)(quoting *Kleppe v. Sierra Club*, 427 U.S. 390, 410 n.20 (1976)).

In this case, the Air Force has failed to meet either goal. First, as set forth in detail below, the EA prepared by the Air Force fails to consider every significant aspect of the environmental impact of the proposed action. Rather, it: (1) omits critical information and fails to include basic analysis required under the law; (2) engages in misleading and flawed analyses for those impacts that are considered; and (3) refuses to consider all reasonable alternatives.

As for the second goal, informing the public, the Air Force has (1) inadequately communicated its limited analysis by relying upon technical jargon; (2) failed to provide the data and/or studies upon which it has based its conclusions; and (3) failed to make any effort to engage the most affected members of the community in the public comment process.

As we detail below, this EA fails to remedy the ongoing violation of NEPA by the Air Force that began years ago and has only accelerated in recent times. For too long, the Air Force has excluded the Tucson community from the decisionmaking process for Operation Snowbird. Unfortunately, this EA appears to be a continuation of that effort.

II. The Environmental Assessment Prepared by the Air Force Fails to Comply with NEPA.

A. The EA is Inadequate and Reveals that the Air Force Has Not Taken the Required "Hard Look" at the Impacts of its Proposed Action

Regardless of whether an agency is preparing an Environmental Assessment or an Environmental Impact Statement, NEPA requires that the agency take a "hard look" at the environmental consequences of the proposed action. *Anderson v. Evans*, 350 F.3d 815, 829 (9th Cir. 2003). "This includes considering all foreseeable direct and indirect impacts." *Idaho Sporting Congress, Inc. v. Rittenhouse*, 305 F.3d 957, 973 (9th Cir. 2002). Courts have made it clear that "general statements about 'possible' effects and 'some risk' do not constitute a 'hard look' absent a justification regarding why more definitive information could not be provided." *Neighbors of Cuddy Mountain v. United States Forest Service*, 137 F.3d 1372, 1380 (9th Cir. 1998). As the following sets forth, here, the EA prepared by the Air Force for OSB fails to take the "hard look" that NEPA requires.
1. The Air Force Has Omitted Important Information and Analysis.

We begin our comments by identifying important information or analysis that the Air Force has simply omitted from the EA and its supporting materials.

a. The Study Relied Upon for the Noise Contours Was Not Initially Available to the Public For Review as Required by NEPA, and Even After the Study Was Made Available, the Information Provided Did Not Include the Modeling.

In the EA, the Air Force refers to and relies upon the "2007 Noise Data, Collection, Review, and Validation Study." EA p. 3-5. However, despite repeated requests from members of Tucson Forward, the Air Force initially refused to make that study available to the public.

It is entirely appropriate for the Air Force to incorporate such a statement in the draft EA. Indeed, the Council on Environmental Quality (CEQ) recently reaffirmed this propriety of this in its most recent document, http://ceq.hss.doe.gov/current_developments/docs/ Improving_NEPA_Efficiencies_06Mar2012.pdf. However, as the Air Force well knows, it must make such documents available to the public during the comment period and explain to the public how the document can be obtained. Instead, in this case, Tucson Forward had to file a Freedom of Information Act request to obtain the document and only received the document via the Davis Monthan website on the final day of the initial comment period. Although the Air Force extended the comment period for 20 days, the study posted on the website did not actually contain any noise data but rather was a collection of aircraft operations data to be used for input into a noise prediction model. In addition, the name of the document posted was not the same as the name referred to in the EA. The ACC/A6XP confirmed in writing that the posted document was in fact the document referenced in the EA as the "2007 Noise Study;" however, because it contains no noise data, the public still has not received a satisfactory and complete response from the Air Force regarding the noise analysis upon which the EA is based.

Under NEPA the Air Force has an obligation to make available to the public the *complete* noise study, including aircraft input data, BASEOPS product, and NOISEMAP profiles. Moreover, the study is over 300 pages long, but the EA never identifies what page or pages ostensibly contain the information that the agency is relying upon. Nor does the Air Force provide a summary of the document that would be easily understood by lay people. This begrudging disclosure of the voluminous, albeit incomplete, study on what was to be the last day of the comment period is a far cry from what NEPA requires.

b. The EA Fails to Include an Impact Assessment on Children.

There are at least four schools under the OSB flight pattern, with one which may be located within the 65 dB (DNL) noise contour. They include The Griffen Foundation Charter School (elementary and middle school) in Julia Keen; Robison Elementary in Arroyo Chico; Howenstine High School; and St Ambrose Elementary in Broadmoor. Howenstine has children learning trade skills in outdoor construction programs. Executive Order 13045 (Protection of Children) requires an assessment of "heath risks and safety risks that may disproportionately affect children". No such assessment is included.

c. The EA Fails To Include an Economic Analysis.

Tucson's premier economic engine is tourism, generating some \$2.02 billion in direct travel spending annually and 21,500 direct jobs. The EA notes that an unusually large number of scoping comments expressed concern over OSB's effect on tourism, but then states that the impact on tourism would be difficult to quantify (separating out the OSB impact from the total DM aircraft impact) so it simply ignores the issue. This is unacceptable for a City that relies economically on and is striving to make itself a "tourist destination."

The EA also fails to address the economic impacts to current residents outside the noise contour lines but under OSB flight paths over the city. In discussing the effect on property values the EA makes generalizations based on changes in "census tracks" adjacent to the base, but it never presents data breaking down those tracts. For example, if the track includes high-end properties outside of the noise contour (Colonia Solana) and low-end properties within the contour (Julia-Keen) an increase in average property values over time would occur but the conclusion that overflights have had no effect on values would be incorrect. Moreover, the concern is that a future *increase* in flights that are both louder and more dangerous would cause property values to decline. That should be the focus of the analysis. The accepted methodology for analyzing economic effects on property values is to examine two comparable properties, in a neighborhood within the noise contour and a neighborhood outside. Then, examine market prices over time. If necessary, the FAA has approved studies of selected neighborhoods around airfields in California which could provide suitable ratios for estimates.

d. The EA Fails to Address the Impacts of Ordnance.

One of the "selling points" in favor of operating the OSB program out of Davis Monthan AFB is the proximity of the Base to a "vast array of targets capable of receiving live and inert ordnance Such capabilities are not readily available to most other NGB units and foreign national units at other national ranges." (Draft EA p. 1-3.) In addition, the Live Ordnance Loading Area and live munitions storage and build-up facilities are identified as important assets. (Draft EA p. 106). Yet absolutely not one word of analysis is provided in regards to impacts resulting from the dropping of live ordnance. To the extent the Air Force believes the impacts of these actions are covered under other NEPA documents, it should have referenced those documents and provided information to the public as to how to obtain them at the beginning of the comment period. The Air Force should do so now in associated with a draft EIS.

e. The EA Fails to Address Health Impacts of the OSB Program.

Consideration of health impacts is an important component of analyzing the human environment, and is referenced in both the statute and the CEQ regulations implementing the procedural provisions of NEPA. Last year, the National Academy of Sciences issued a report on *Improving Health in the United States* and the role of health impact assessment, a systematic process that mirrors the environmental impact assessment process. The report states that, "Significant improvements in Americans' health will only occur if health impacts are considered when developing policies, programs, plans, and projects, particularly in sectors that historically have been viewed as unrelated to health, such as transportation, education, agriculture and housing." *Improving Health in the United States: The Role of Health Impact Assessment*, available from the National Academies Press or at <u>www.nap.edu</u>. To that list of government actions viewed as unrelated to health, we would add the constant noise and vibrations caused by low level overflights in neighborhoods closest to Davis Monthan. The report further explains that in the case of proposed federal actions covered by NEPA, there is no need to embark upon a separate impact assessment process, but there <u>is</u> a need to integrate health considerations into the NEPA analysis much more robustly than is typically done by agencies. It further points out that federal agencies need to work with local health departments to help assess health-related impacts.

There is a considerable body of professional literature on the health impacts of noise that needs to be addressed in the context of NEPA compliance for the proposed extension of the OSB program. Residents frequently experience multiple flights at low levels, particularly, although not exclusively, in the Julia Keen neighborhood. As members of the medical profession have noted, the problem with the use of the 65 dB DNL (day-night average sound level is that human beings do not experience noise on "average"; they experience it as particular events and can experience harm from individual events as well as the cumulative effects of repeated high decibal levels of takeoffs and landings. Further, the impacts of repeated noise exposure on children is particularly deleterious and can cause hearing loss, psychological distress and impaired reading comprehension and memory in children. See, Santa Monica Airport Health Impact Assessment (HIA), pp. 112-14, February 2010 (attached as Exhibit 1). Under NEPA, the Air Force needs to analyze the impacts of the noise actually experienced by residents. See, Stenzel, Trutt, Cunningham and Kassel, Flying Off Course: Environmental Impacts of America's Airports, NRDC, October, 1996 ("NRDC Report"), pp. 19-23, for a discussion of how the 65 dB DNL standard underestimates the level at which many people are impacted by aircraft noise.(Relevant excerpts of the NRDC Report are attached as Exhibit 4.)

There are other potentially serious impacts to human health from repeated overflights. For example, the Santa Monica Airport report noted above explains that, "[b]lack carbon is one component of jet fuel exhaust and has the ability to persist in the environment for days to weeks. black carbon levels correlate with airport activity, particularly with airplane departures. Multiple studies have linked black carbon to respiratory and cardiovascular disease." Id. at p. 8-9. Note that in the comment letter from Rita B. Ornelas, a Board Member of Tucson Forward and her husband, Ruben C. Ornelas, Mrs. Ornelas describes in some detail a black substance coming down from the planes flying over their house and accumulating in her home vents. She also describes various sickeness that she and her husband have experienced that may be related to the overflights. Letter dated October 2 2012 from Rita B. Ornelas and Ruben C. Ornelas to 355WGPA@dm.af.mil, (attached as Exhibit 2 and incorporated herein). Likewise, the Santa Monica report documents epidemiological evidence linking ultrafine particles contained in jet fuel with adverse human health effects related to respiratory and cardiovascular disease (pp. 9-10) as well as genotoxic and carcinogenic effects of polycyclic aromatic hydrocarbons, another group of compounds that exist in jet fuel exhaust (pp. 11-12). These impacts need to be fully analyzed as they relate to today's OSB program, the proposed expansion of it and as they affect neighborhoods in the pathway of these flights, especially those neighborhoods closest to the runway who experience the most impacts from takeoffs and landings.

f. The EA Fails to Identify Reasonable Mitigation Measures

Despite the significant increase in the number of flights, the timing of flights, and the type of aircraft, the draft EA contains no discussion of mitigation measures that might be appropriate for affected residents and communities. As the Air Force knows, the law is clear that:

[O]ne important ingredient of an EIS is the discussion of steps that can be taken to mitigate adverse environmental consequences [O]mission of a reasonably complete discussion of possible mitigation measures would undermine the "actionforcing" function of NEPA. Without such a discussion, neither the agency nor other interested groups and individuals can properly evaluate the severity of the adverse effects. An adverse effect that can be fully remedied by, for example, an inconsequential public expenditure is certainly not as serious as a similar effect that can only be remedied through the commitment of vast public and private resources.

Robertson v. Methow Valley Citizens Council, 490 U.S. 332 at 351-351 (1989).

The Council on Environmental Quality (CEQ) recently reemphasized the importance of mitigation under NEPA in the context of both EAs and EISs. As the guidance points out, the purpose of compliance with NEPA is to prevent or eliminate damage to the human environment and mitigation measures are one way to achieve that goal. *Memorandum for Heads of Federal Departments and Agencies on the Appropriate Use of Mitigation and Monitoring and Clarifying the Appropriate Use of Mitigated Findings of No Significant Impact from Nancy H. Sutley, Chair, Council on Environmental Quality, January 14, 2011.*

The Air Force itself recognizes and incorporates the requirement of identifying and analyzing mitigation measures in its NEPA regulations. That regulation states that the NEPA documents must indicate "clearly" whether mitigation measures must be implemented and must specifically identify which mitigation measures, if any, have already been incorporated into the proposal and which are being proposed. As the Air Force regulations correctly notes, "Both the public and the Air Force community need to know what commitments are being considered and selected, and who will be responsible for implementing, funding and monitoring the mitigation measures" 32 C.F.R. § 989.22.

However, despite the mandate to identify mitigation measures for public and interagency review and comment, the DEIS ignores mitigation measures. Notably, there is virtually no serious discussion of mitigation measures for noise, contrary to both NEPA and the entire body of law and policy associated with environmental justice analysis (for the later issue, please see discussion under "Inadequate Environmental Justice Analysis." Residents in areas that are already experiencing disturbing noise impacts are now faced with realizing that the use of their property outside may be significantly reduced further and that their lives inside their homes will be made worse. At least for some areas, residents' homes may be affected to the extent that there is legally a taking of their property. As the Air Force well knows, the Julia Keen school was closed in 2004 due to impacts of overflights. The Air Force needs to identify serious mitigation measures, including purchase of real property, in light of this latest proposed expansion of the OSB program.

2. Much of the Analysis Included in the EA is Flawed or Misleading.

In addition to the above omissions, the EA is also flawed because much of the analysis in it is either flawed or misleading, or both.

a. The Noise Analysis is Inadequate and Incomplete.

We begin with noise, which is, perhaps, the most significant impact and certainly a major concern for the Tucson citizens who live in the flight path. The noise analysis completed for the EA is incomplete because (1) it leaves out the F-18s, Harriers, and F-22s, which are the noisiest OSB aircraft; (2) it does not consider any noise impacts outside of the 65 dB (DNL) contour line and thus does not consider the effects of aircraft noise over large areas of Tucson that are not within the immediate noise contours but are very much affected by the increased noise; and (3) it only considers the aggregate noise of the aircraft in general rather than effects of numerous individual sorties concentrated during the anticipated training operations.

i. The Noise Analysis Fails to Include the Noisiest Aircraft.

Perhaps the most glaring deficiency is the fact that the EA appears to use data only from quieter aircraft, and does not discuss at all the noise effects of F-18s, Harriers, and F-22s, which have flown in Operation Snowbird in the past and which the EA authorizes to be flown in the future. *See* EA at 2-4, 2-5 (identifying "additional aircraft" that may participate, but not limiting aircraft to those identified), *See also* Wyle Laboratories Draft Preliminary Study Report, *Operation Snowbird Safety Procedures and Operational Study Services* (2010) pp. 27-33 (identifying aircraft, including Harriers and F18s, that have flown historically with OSB) (A copy of the Wyle Study is attached as Exhibit 3.)

As the Air Force has not at this date released to the public the complete noise analysis, it is not possible to make fully informed comment on this issue, but some observations can be made by what the EA does reveal. The EA states, for example, at 4-1 that "[a]n assumption was made that F-16C and F-15A aircraft were suitable substitutes for additional aircraft associated with OSB, as the useable electronic data available from the BASEOPS files were limited to F-16, F-15, A-10, GR-4, and C-130 aircraft."

This sentence appears to state that because the Air Force does not have data on other planes, it will assume that the data it does have are "suitable substitutes." But not having data is not a lawful reason for making such an assumption, particularly when the assumption is demonstrably incorrect. F-18s, Harriers, and F-22s are considerably louder than F-16s, and the EA authorizes their use. To accept as a substitute the noise of an F-16 for the noise of a Harrier or F-22 is not rational or lawful. If the Air Force is not able to gather the data on noise for the louder aircraft it authorizes, it must at least reveal that deficiency. However, we believe the Air Force is capable of obtaining the needed information, and should prepare a new environmental review that forthrightly confronts the noise of the aircraft it authorizes, and reveals the effects of that noise. 40 C.F.R. 1502.22.

ii. The EA Does Not Include an Analysis of Sound Impacts Outside of the 65dB (DNL) Contour Line.

The sound impacts outside the 65dB (DNL) Contour Line are not inconsequential—in fact, many people who reside far outside the 65db overlay have commented on this action, have made complaints to the Air Force's telephone complaint line, and will be affected by the decision to increase overflights over their homes, schools, businesses, and parks.

The EA acknowledges that noise is "unwanted sound" and that humans can detect unwanted sound down to 0 dB. Draft EA at 3-1. But the EA then sets an irrationally high standard for what constitutes an "effect" of unwanted sound: it suggests that the sound must be high enough to make living under a single instance of it a "non-compatible use," and finds that 65 dB is that level. EA at 3-5. The EA also provides a chart to show at what point subjects were "highly annoyed" by a given noise. EA at 3-3, Figure 3-1. The chart's first data points are at 45 dB, and shows that a single instance of a 65dB noise is highly annoying to some ten percent of the subjects.

The Air Force must acknowledge that noise levels below its "non-compatible use" threshold still have effects upon the communities that must endure them, and these effects must be revealed and considered.

iii. The EA Considers Only Aggregate Noise Rather Than the Effects of Numerous Flyovers

A related deficiency is the evaluation only of aggregate, average noise levels over a 24 hour period instead of the sheer number of the flyovers that cause the noise.

The pebble in your shoe isn't all that painful in the first few steps, either, but the repeated imposition of that pebble will wear you raw. Similarly, a continuous, repeated exposure to decibel levels of 65 dB will wear most subjects raw over time even when a single instance does not particularly aggrieve them. See NRDC Report, p. 19-21. (The Air Force has not included a map that shows where complaints have come from across Tucson, but such a map—although admittedly inconclusive—might be useful to learn how far away from D-M people can be and still be bothered by the noise. Surely the Air Force has compiled this data?)

The EA does not address the effects of continued exposure to the noise of aircraft based on the number of times per day a person will have to hear these aircraft even at decibel levels less than the average of 65 dB. See NRCD Report at p. 22-23. We are quite familiar with people who live many miles from D-M in, for example, the Sam Hughes Neighborhood, who are exasperated by the overflights because they continuously interrupt conversations. We notice that the EA proposes about 2,250 flights per year, which equates to about 4,500 flyovers of Tucson (because a sortie involves a departure and a landing) per year. Because OSB only operates about two weeks out of four, this means about 24 flyovers per day on the days that OSB is in operation. Any person lives or works in the departure or the landing path will be subjected to 12 overflights per day, about 182 days per year.

Again turning to the chart provided by the EA at page 3.3, we notice that it measures "Single-Event Noise." The OSB does not propose to create single-event noise. It proposes

multiple-event noise, daily, far into the future, and the EA fails to but must reveal these effects in a meaningful fashion.

iv. The EA Provides Misleading Information Regarding its Ability or Efforts to Abate the Noise.

In several places in the EA, the Air Force represents that in an effort to abate the noise over residential areas, "departures would use Runway 12 and arrivals would use Runway 30, to the extent practicable." *See, e.g.* EA 2-9. The Air Force states that, "[t]his action would concentrate the majority of the air traffic noise southeast of DMAFB and away from the majority of the population near downtown Tucson." *Id.* What the EA fails to disclose, however, is that such a configuration would almost never be "practicable." Because of the standard operating protocols at the Tucson Tracon, the opportunity for OSB planes to depart on Runway 12 and return on Runway 30 would be severely limited and almost exclusively limited to nighttime flights, which would rarely occur. During the day, when the vast majority of the sorties would take place, both departures and landings would be required to use Runway 12 or Runway 30, depending on wind. Runway 30 departures would obviously depart northwest bound over the city. *See* Declaration of Chris Reynolds ("Reynolds Decl.") attached as Exhibit 5.

b. The Safety Analysis is Based Upon Incomplete Data.

The safety analysis set forth in the EA is both incomplete and inadequate.

i. The Analysis Fails to Fully Evaluate All Potential Aircraft.

As with the noise analysis, the safety analysis conveniently avoids including those aircraft that are included in the list of possible aircraft that will be used in the OSB program but that have poorer safety records, and fails to address potential safety issues associated with the aircraft that are included. The safety analysis is based on a Table developed by DMAFB listing the risk factors for OSB aircraft. Significantly, neither the methodology nor the calculations are provided for public review, which is contrary to NEPA and makes commenting on the risk assessment difficult. However, it is apparent from the information provided that the calculated risk factors fail to take into consideration the full safety picture of the different types of aircraft being brought in at low level over heavily populated neighborhoods. For example, the F-15 is given a low risk factor, but the evaluation fails to consider the fact that the fleet is at the end of its service life. One disintegrated unexpectedly three years ago on a training mission in Missouri. See, Associated Press, "Defective Beam Cited in F-15 Crash," January 10, 2010 (available at http://www.military.com/NewsContent/0,13319,159762,00.html). As the cited article notes, "the results of a parallel examination [found] as many as 163 of the workhorse aircraft also have flawed support beams, or longerons." *Id.*

Even more troubling is the fact that the Table does not even include data on aircraft with worse safety records than the A-10 including: F-18s, F-22s, Ospreys. Notably, the safety record of the Ospreys has sparked protests in Japan in response to a plan to deploy that aircraft in Okinawa. *See*"Okinawa residents protest transfer of six Ospreys to base," Japan Times, Oct. 2, 2012 available at <u>http://www.japantimes.co.jp/text/nn20121002a3.html</u> (last accessed 10/2/2012). The only foreign aircraft included is the Tornado. There is no data on the Mirage, Typhoon, Kfir, and Rafale.

As we have repeatedly observed, because of the location of Davis Monthan and the surrounding mountains, there is no way for the OSB program to avoid flying over heavily populated areas of Tucson. If unsafe aircraft are included in the OSB program, the safety of the community is a risk. Before expanding the program to include such a wide variety of aircraft as that contemplated by the EA, the Air Force has an obligation to fully and objectively evaluate the safety implications of the entirety of its potential fleet and disclose that information to the public.

ii. Accident statistics are incomplete.

The safety analysis is also incomplete because it limits its analysis to Class A mishaps, leaving out Class B and Class C mishaps. OSB aircraft must fly low-level approaches over populated residential areas to return to the base. Under these circumstances, the loss of a simple bolt could be fatal to a resident below. The full range of mishaps should be evaluated.

iii. The EA Fails to Recognize the Particular Safety Hazards Presented by Visiting Pilots.

In the EA, the Air Force states that "[e]very visiting unit would receive the OSB briefing (known as the Local Area Brief) regarding noise abatement requirements and procedures for flights over urban areas." EA 2-9. However, what the EA fails to acknowledge is that over the years, the practical experience with OSB pilots has revealed that even after these local area briefings, there is an initial adjustment period at the beginning of each training week where pilot errors are much more prevalent. For example, an occasional error made by visiting pilots is the mistake to turn immediately after take off and not fly a straight-out course as required, often risking an in-air collision with another recently departed aircraft traveling on a parallel departure route off of TUS. Reynolds Decl. ¶10. Another repeated problem area are recoveries instructed to fly the Davis recovery, erroneously flying off the radials of DM tacan and not Tus Vortac. *Id.* at ¶11. Also prevalent are aircraft descending earlier than instructed on this recovery. *Id.* at ¶12. These mistakes provide a greater potential for loss of separation particularly closer in to the Tucson airport where due to the already close proximity of the airports, strict adherence to procedures and instructions are needed. *Id.*at ¶13. Such collisions have, fortunately, been avoided in the past because of the vigilance of the Tracon air traffic controllers, but it is a recurring problem that will only be exacerbated by an expansion of the program. *Id*.at ¶14.

c. The Environmental Justice Analysis Is Inadequate and Incomplete.

i. The EA Identifies Disproportionate Impacts but Fails to Provide the Required Analysis.

In the draft EA, the Air Force acknowledges, as it must, that a disproportionate number of minority and low-income populations are affected by noise as compared to other populations in Tucson (Draft EA, p. 2-13, Table 2-4). In fact, <u>all but one</u> of the adversely affected census tracts has been determined to be a geographic area that is disproportionately populated by minority or low income residents. Yet despite the awareness of this important fact, the Air Force fell woefully short of implementing the mandates of NEPA, Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," February 11, 2991, and the accompanying President Memorandum, including specific direction on environmental justice within the context of NEPA, the Memorandum of

Understanding on Environmental Justice and Executive Order 12898, signed by, among others, John Conger, Acting Deputy Under Secretary (Installations and Environment) Department of Defense, August 4, 2011, the Council on Environmental Quality's Guidance (CEQ) regarding Environmental Justice Under the National Environmental Policy Act (December 10, 1997), and the Air Force's own "Guide for Environmental Justice Analysis with the Environmental Impact Analysis Process (EIAP), Department of the Air Force, November 1997, and "Guidance for Incorporating Environmental Justice Concerns in EPA's NEPA Compliance Analyses," August, 1998.

ii. There Was Inadequate Outreach to and Involvement of Affected Populations:

Each of the environmental justice directives and guidance referenced above strongly emphasizes the importance of taking special care in notifying and involving environmental justice populations in the analysis of the proposed action. Executive Order 12898's Section 5-5 on "Public Participation and Access to Information" encourages federal agencies to translate crucial public documents, notices and hearings for limited English speaking populations and directs agencies to work to ensure that public documents, notices and hearings are concise, understandable and readily accessible to the public. CEQ's guidance on integrating environmental justice issues into the NEPA process provides more detailed guidance on these points (CEQ Guidance, pp. 11-13). The EPA Guidance on incorporating environmental justice considerations into the NEPA process, which is available to the Air Force and to the public, provides even more detailed recommendations on outreach to environmental justice communities, including providing simultaneous translation of discussion at meetings, using local translators where possible, translation of key documents in their entirety, establishing comment lines and many more ideas. EPA EJ Guidance, p. 41, Exhibit 4.

Finally, the applicable Air Force guidance states that, "Public outreach and advertising of the process should be directed specifically toward minority and low-income groups, as well as toward the general public, to encourage these groups to identify themselves and their concerns. This effort should include coordination with federal, state, local, and tribal governments and agencies; local groups; community leaders; and social agencies in the local community to identify target groups and the channels (including <u>non-English language where necessary</u>) that would reach these groups." Air Force EJ EIAP Guidance, p. 5, emphasis added. The Air Force guidance goes on to discuss identifying various social service agencies, religious organizations, public interest organizations and other such groups that may be working directly with the affected communities and gives detailed guidance on doing so. The Air Force guidance also states that:

All minority and low-income groups thus identified should be specifically notified of the availability of any information requesting input into the planning process and any subsequent environmental justice documents available for review. . . . Information should be presented in clear, nontechnical language. It may be advisable to schedule separate, smaller scoping meetings at community locations where minority and low-iincome populations would feel more comfortable participating, such as a church, school or community center."

Air Force EJ EIAP Guidance, p. 6.

Despite this wealth of direction, from the Commander in Chief on down to the Air Force guidance, the Air Force dropped the proverbial ball. First, the public notification for the availability of and the comment period on the EA was seriously flawed. In the draft EA, the statement is made that, "Similar notices were sent confirming the availability of the draft EA, in an attempt to provide meaningful involvement of the low-income and minority populations." (OSB EA p. 4-15) However, no notices were received by residents of the Julia Keene neighborhood. This has been confirmed by residents of the area as well as by an Air Force representative who confirmed to one of those residents that a mistake had been made in the text of the draft EA that would be "corrected" in the final EA. Mistakes happen, of course, but the way to correct this mistake is to actually notify the affected environmental justice communities appropriately, in both English and Spanish, the dominant language in these areas, at the time of publication of a Notice of Intent to prepare an EIS. If the Air Force chooses to simply conform the text of the final EA to reality, it will not actually fix the mistake; it will simply eliminate a false statement.

Second, a request was made to translate at least the executive summary into Spanish, given the high preponderance of Spanish-speaking residents in the most directly affected neighborhoods. In response the Air Force translated the executive summary (5 pages of 144 pages) that it posted on the Davis-Monthan website on the last day of the initial comment period. This last-minute response, although a start, is less than adequate in the face of voluminous Air Force and NEPA guidance on public outreach to minority communities. It should also be noted that the decision to extend the comment deadline only 20 days, resulted in a significantly shorter comment period for the Spanish speaking community.

iii. The Air Force Failed to Prepare the Required Analysis:

Executive Order 12898 requires an analysis of "the environmental effects, including human health, economic and social effects of Federal actions" on the minority and low income communities being affected by the proposed action. Interestingly, the "Sample Environmental Justice Analysis" found in the Air Force Guidance focuses on noise from both aircraft and surface traffic. One clear omission in the present draft EA that this example highlights is a surface noise analysis for all alternatives. Air Force EJ EIAP Guidance, Appendix E, p. E-3.

This draft EA has no such analysis of either aircraft or surface noise, despite the virtual doubling the number of flights on the impacted group of residents. The apparent reason for this omission is the conclusion stated in the draft EA that "noise impacts relative to EJ issues would be negligible." Draft EA, p. 4-15. As explained in detail in the discussion on noise, this conclusion is based on inappropriate and misleading use of data that has particular relevance to the Julia Keen neighborhood and other areas with minority and low income populations. For example, rather than counting the number of residents in this area, the analysis counts the number of residences. However, the Julia Keen neighborhood has a number of multi-family dwellings and it is the neighborhood closest to the northwest end of the runway at Davis Monthan AFB. The neighborhood already experiences sound levels far above the 65-69 and 70-74 DBA levels indicated in the draft EA. The noise level of a single F-22 passing over at 500' above ground level (i.e., the level of the Julia Keen Neighborhood) can reach 120 dB.

Further, the Julia Keen neighborhood is right in the path of the "racetrack" pattern which is flown shortly before landing over the northwest area. The poster displayed during the scoping

meetings showed this circular "racetrack" pattern to be located within the boundaries of the base. This is incorrect. The "racetrack" landing pattern is made over the Julia Keen neighborhood by most OSB aircraft.

In short, all of the problems identified earlier in the discussion on noise impacts are applicable to the Julia Keen neighborhood and other affected low income and minority communities. The conclusion that the near doubling of sorties, new types of aircraft, potential night flights and other changes in the program will not have a significant impact on these neighborhoods is not substantiated by the analysis.

iv. The Air Force Failed to Identify Mitigation Measures

As noted elsewhere in this comment letter, the draft EA omits all discussion of mitigation measures. This is a particular egregious omission in the context of affected environmental justice communities. As stated in CEQ's Guidance on Environmental Justice:

"Throughout the process of public participation, agencies should elicit the views of the affected populations on measures to mitigate a disproportionately high and adverse human health or environmental effect on a low-income population, minority population, or Indian tribe and should carefully consider community views in developing and implementing mitigation strategies." CEQ guidance p. 16.

The Air Force example of an environmental justice analysis for noise impacts includes specific mitigation measures possible for noise impacts. Air Force EJ EIAP Guidance, p. E-3. No special meetings were arranged with the Julia Keen neighborhood or other low-income or minority communities to discuss these types of mitigation measures.

d. The Air Force Failed to Adequately Consider Cumulative Impacts Past, Present and Future.

Federal agencies are required to assess the incremental impact of their proposed actions when added to other past, present and reasonably foreseeable future actions so that the decisionmaker, other agencies and the public can have a realistic picture of what the cumulative impacts will actually be on a particular resource in a particular location. Thus, agencies must assess the impacts of not only their own actions (past, present and reasonably foreseeable) but the actions of other agencies and private entities if those actions affect the same resources affected by the lead agency's actions. 40 C.F.R. § 1508.7.

The effects of past actions must be analyzed by an agency, "to the extent that they are relevant and useful in analyzing whether the reasonably foreseeable effects of the agency proposal for action and its alternative may have a continuing, additive and significant relationship to those effects." Memorandum from James L. Connaughton, Chairman, Council on Environmental Quality to Heads of Federal Agencies, *Guidance on the Consideration of Past Actions in Cumulative Effects Analysis*, June 24, 2005. In situations where past actions have a significant cause-and-effect relationship with the direct and indirect effects of the proposed action, agencies must analyze those impacts in the context of the proposed action. Further, the guidance points out that information about past actions that were similar to the proposed action may be useful in describing the possible effects of the proposed action.

In the context of this proposed action, the Air Force has a particular burden in relationship to the past and present activities undertaken in Operation Snowbird because the Air Force failed to comply with NEPA at the time significant operational and programmatic changes were made a number of years ago. The Air Force has not met the burden of analyzing the respective direct and cumulative impacts of past and present actions in this draft EA.

Additionally, the Air Force's discussion of cumulative impacts in regards to present and reasonably foreseeable actions is inadequate. The CEQ regulations do not just require the <u>identification</u> of actions having impacts on the same resources; they require analysis of those impacts. The EA does not provide that analysis.

Finally, despite a short discussion of the need to establish spatial and temporal parameters for cumulative effects analysis (Draft EA, p. 5-1), the analysis fails to identify such parameters. In short, the Air Force needs to substantially rework the cumulative effects analysis (*see*, *Considering Cumulative Effects Under the National Environmental Policy Act*, Council on Environmental Quality, January, 1997.). When done appropriately, we believe such analysis will, in fact, trigger a determination of significance, thus requiring preparation of an EIS.

i. Evolution of Operation Snowbird and Past Actions:

To evaluate the adequacy of the draft EA's analysis, it is important to understand the history and evolution of Operation Snowbird at Davis Monthan Air Force Base. In describing that history, the EA notes that a series of changes gradually took place in the original OSB program of winter-proficiency training over the years, principally in types of Air Guard aircraft involved. It fails to note that after 1995, more significant changes were introduced and culminated about the year 2000 into a major and significant change in OSB mission involving: (i) change of the type of training from wintertime proficiency to combat training; (ii) change from winter-time to full year-around training; (ii) change from training ANG units to sister service and foreign pilots and aircraft. Specifically, it began bringing in Harriers, F-18s, and foreign allied aircraft (rather than A-10s) at low levels over populated neighborhoods, which clearly exposed residents to increased noise and safety-risk.

It is only the failure to recognize this OSB mission change, its significance, and the subsequent impact on the surrounding community that allows the current draft EA to produce a conclusion of no significant impact on the proposed expansion of the changed OSB mission. Selection in the draft EA of a baseline year ("status quo") of 2009 air operations (some 9 years after the mission change) to be used for comparison against the proposed EA expansion predicatably produces only a small change resulting from increased flights along with the resulting impact on the surrounding environment and community. However, the changeover from the original winter proficiency program and its significant impact on the community was never analyzed in accordance with law. In the cumulative impacts section of the DEA on page 5-2, Line 40, it is claimed that OSB aircraft were evaluated in the 2002 CSAR EA even though there is no mention of either the Operation Snowbird program or their aircraft.

The last NEPA compliance for the OSB program was an EA produced in 1978, when, as noted above, the program was of quite a different nature with significantly lower impacts. Neither the CSAR EA, which contrary to the Air Force's assertions did not cover OSB, nor the draft Wyle report, not a NEPA document, can substitute, make-up for, or bridge the gap in the

Air Force's compliance with NEPA. The Air Force must analyze OSB activities from 1978 through the present in two ways: i) to the extent that aircraft flying now were not being utilized in the OSB program as of 1978, that analysis must now be provided as part of the cumulative effects of past actions; ii) to the extent that aircraft not flying now were, at some point between 1978 and the present utilized in the OSB program, the Air Force should determine whether the impacts of those aircraft are the same or very similar to aircraft now being proposed to be added to the OSB program, and if so, determine whether analysis of those impacts would be a useful addition to the analysis for the decisionmaker and the public.

ii. Present Actions for Purposes of Cumulative Effects Analysis:

The EA lists several Air Force and joint service actions that occur on Davis Monthan AFB or nearby airfields, mentions very superficially plans of other government agencies near Davis Monthan, and purports to identify non-federal actions near Davis Monthan in three sentences. Surprisingly, the list omits several Air Force actions of relevance. For example, the draft EA fails to mention events such as the Heritage Flight Conference that was held at Davis Monthan in March of this year or the bi-annual Air Show/Open House that was held at Davis Monthan in April, 2012. One of the Air Show participants broke the sound barrier while practicing causing damage to several businesses and homes. These properties were not located in the high noise zone mentioned in the EA, but in the area of the circular flight path over Midtown Tucson. Also, DM hosted the Hawgsmoke Competition in August. The competition was held at the Barry M. Goldwater Range, but they came thundering back to Davis-Monthan over the neighborhoods.

It is apparent that no serious effort was made to identify present actions contributing to the same types of impacts as OSB, especially if those actions are not military actions. For example, there is no mention of flights from Tucson International Airport. The draft EA fails to mention the railroad tracks located near the neighborhoods that received the highest DM noise impact. Both the Veterans Bridge near 36th and Alvernon and the planned 22nd Street overpass have been widened to accommodate additional train tracks.

i. The EA Does Not Include an Analysis of Sound Impacts Outside of the 65dB (DNL) Contour Line.

The sound impacts outside the 65dB (DNL) Contour Line are not inconsequential—in fact, many people who reside far outside the 65db overlay have commented on this action, have made complaints to the Air Force's telephone complaint line, and will be affected by the decision to increase overflights over their homes, schools, businesses, and parks.

The EA acknowledges that noise is "unwanted sound" and that humans can detect unwanted sound down to 0 dB. Draft EA at 3-1. But the EA then sets an irrationally high standard for what constitutes an "effect" of unwanted sound: it suggests that the sound must be high enough to make living under a single instance of it a "non-compatible use," and finds that 65 dB is that level. EA at 3-5. The EA also provides a chart to show at what point subjects were "highly annoyed" by a given noise. EA at 3-3, Figure 3-1. The chart's first data points are at 45 dB, and shows that a single instance of a 65dB noise is highly annoying to some ten percent of the subjects. The Air Force must acknowledge that noise levels below its "non-compatible use" threshold still have effects upon the communities that must endure them, and these effects must be revealed and considered.

ii. Failure to Provide an Adequate Analysis of Cumulative Impacts:

As noted above, the draft EA does not adequately identify the past, present and reasonably foreseeable actions that should be analyzed in relationship to impacts of the proposed action and alternatives. But even to the extent it does identify actions for purposes of cumulative impacts analysis, it fails to take the final step and provide adequate analysis. The discussion purporting to provide such analysis is superficial and conclusionary. As the Court of Appeals for the Ninth Circuit has repeatedly determined, having a section marked "cumulative impacts" does not necessarily equate to an adequate analysis ("While the district court was correct in observing that there are "twelve sections entitled 'cumulative effects," these sections merely provide very broad and general statements devoid of specific, reasoned conclusions." *Muckleshoot Indian Tribe v. US Forest Service*, 177 F.3d 800, 811 (1999); *see also, Center for Biological Diversity v. National Highway Traffic Safety Administration*, 538 F.3d 1172 (9th Cir. 2008) in which the Court concluded that the EA's cumulative impacts analysis was inadequate because while it quantified certain expected emissions, it did not evaluate the incremental impact that those emissions would have in light of other past, present and reasonably foreseeable actions.

e. The Air Force Failed to Consider a Reasonable Range of Alternatives.

NEPA requires that federal agencies include a detailed statement of "alternatives to the proposed action" in any recommendation or report on actions significantly affecting the quality of the human environment. 42 U.S.C. § 4332(2)(C)(iii). Additionally, the statute mandates that the agencies "study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources." Id. § 4332(2)(E). The "alternatives" section is "the heart of the environmental impact statement." 40 C.F.R. § 1502.14. "The consideration of alternatives requirement . . . guarantee[s] that agency decisionmakers have before them and take into proper account all possible approaches to a particular project (including total abandonment of the project) which would alter the environmental impact and the cost-benefit balance." Bob Marshall Alliance v. Hodel, 852 F.2d 1223, 1228 (9th Cir. 1988)(internal quotation marks, punctuation, and citation omitted) (emphasis in original). Here, the alternatives analysis set forth in the EA is inadequate for two reasons. First, it fails to consider alternative locations for the expanded OSB program, and second, the "no action alternative" is improperly based upon an earlier decision to expand the OSB program that was never subject to the appropriate NEPA analysis.

> i. Because the EA Fails to Consider Alternative Locations, the Air Force Has Failed to Adequately Consider Reasonable Alternatives.

In the EA, the Air Force eliminates from consideration any alternatives that involve relocating OSB to other installations. The ostensible reason for eliminating any such alternative

is twofold. First, the Air Force claims that relocation would require delays that would have an adverse impact on the training mission. Yet, common sense suggests that if a relocation would result in fewer environmental impacts without compromising the mission, it could be achieved through a gradual transition that would avoid delays. The fact that this type of a relocation was not even acknowledged reveals that the Air Force did not give serious consideration to such an option before eliminating it.

The second reason given for rejecting relocation to another installation is that it "would not satisfy the purpose and need (i.e. update and implement the TP 60-1)." EA at 2-11. However, the purpose and need set forth in the EA is not so narrow, and in fact, could be satisfied by a relocated OSB program:

The purpose for the Proposed Action is to identify the required training to be conducted to build and maintain the readiness of active, reserve, and guard units composing the Total Force of the Department of Defense (DoD) so they are capable of supporting extended combat and other national security operations, including joint coalition air operations and multi-service activities, all of which increasingly require greater interoperability. The need is to provide training opportunities to the Total Force, as well as to foreign national units; such training would not only be valuable to our allies, but would also provide realistic training for U.S. units for times when they have to deploy overseas and conduct missions with foreign national units. The ANG and foreign allies of the Air Force have an immediate, real-time need to provide trained air crews to support the ongoing combat operations in Afghanistan, Iraq, Africa, and other global locations currently represents 21 percent of the uniformed members of the Total Air Force. Congressionally proposed reductions in Air Force, ANG, and Air Force Reserve manpower have effectively increased the demand for fully trained aircrews within all operational theaters. Delays in providing these trained aircrews would be unacceptable to combat commanders relying on trained aircrews to execute their ongoing day-to-day missions because they represent unacceptable risk to the lives of other American and allied forces who depend on their support.

EA 1-6 through 1-7.

In this regard, the Air Force's failure to consider any alternative that involves relocation of the OSB program is much like the Army's failure to consider any location other than Hawaii when it was evaluating the environmental impacts of transforming the 2nd Brigade, then stationed on Oahu, Hawaii, into a Stryker Brigade Combat Team. '*Ilio 'ulaokalani Coalition v. Rumsfeld*, 464 F.3d 1083 (9th Cir. Haw. 2006). In that case, the Ninth Circuit acknowledged the general rule that while an agency has the discretion to define the purpose and need of a project, it may not "define its objectives in unreasonably narrow terms." *Id.* at 1097, n. 3 quoting *City of Carmel-by-the-Sea v. United States DOT*, 123 F.3d 1142, 1155 (9th Cir. 1997). However, the Court rejected the argument that the Army's had made its objective too narrow. Rather the court found:

What is missing is the consideration of alternate ways to accomplish its stated mission. The Army states its mission as follows: "to enable the Army to achieve the force characteristics articulated in the Army Vision in the most timely and

efficient manner possible and without compromising readiness and responsiveness.... Transformation is needed to address the changing circumstances of the 21st Century.".... It then leaps to the assumption that transformation in Hawaii or no action are the only alternatives. This is where the impermissible "narrowing" takes place. The Army violated NEPA by not considering alternatives that include transformation of the 2nd Brigade outside of Hawaii.

'Ilio'ulaokalani Coalition, 464 F. 3d at 1098. Just as the EIS in *'Ilio'ulaokalani Coalition* failed to ask and answer the question "Why Hawaii?", the EA here has punted on the question of "Why Tucson?" And, the fact that DM actively solicits participants for the Tucson OSB through advertisements demonstrates that there are other equally available locations out of which OSB can operate. *See* Advertisement attached as Exhibit 6.

ii. The No Action Alternative Inappropriately Builds Upon Decisions that Were Never Subjected to NEPA Analysis.

As discussed above under cumulative impacts, it is only by failing to address the significant changes to the OSB program since the last EA was prepared in 1978 that the Air Force is able to claim that the current proposed action will not result in significant impacts. This flaw is also manifest in the "no action alternative."

Federal regulations explicitly require that environmental review be timely. "Agencies shall integrate the NEPA process with other planning at the earliest possible time to insure that planning and decisions reflect environmental values, to avoid delays later in the process, and to head off potential conflicts." 40 C.F.R. § 1501.2 (2005). Consistent with this requirement, the Ninth Circuit has repeatedly held that dilatory or ex post facto environmental review cannot cure an initial failure to undertake environmental review. *See, e.g. West v. Secretary of the Department of Transportation*, 206 F.3d 920, 925 (9th Cir. 2000) (holding that if completion of the challenged action were sufficient to moot a NEPA claim, an agency "could merely ignore the requirements of NEPA, build its structures before a case gets to court, and then hide behind the mootness doctrine. Such a result is not acceptable.").

Therefore, where an agency has failed to undertake the required NEPA analysis for prior decisions, it may not attempt to validate those prior decisions in a subsequent NEPA analysis that fails to remedy the earlier omission. *See, e.g. Pit River Tribe v. United States Forest Serv.*, 469 F.3d 768 (9th Cir. 2006)(held that where agencies never took the requisite "hard look" at whether the Medicine Lake Highlands should be developed for energy at all, and by the time the agencies completed an EIS, "the die already had been cast," the 1998 lease extensions and the proposed development of the invalid lease rights violated NEPA.) *Friends of Yosemite Valley v. Kempthorne,* 520 F. 3d 1024, 1037-1038 (9th Cir. 2008)(Court rejected the Park Service's decision to use components of a 2000 Comprehensive Management Plan that had previously been struck down by the court as the basis for its No Action alternative. The court held that the No Action alternative may not "assume the existence of the very plan being proposed.)

Here, the Air Force is assuming the existence of a Snowbird Program that permits yearround flying of aircraft other than A-10s. But there is no NEPA-compliant agency decision underpinning these activities. Rather, they are taking place with gross disregard for NEPA's requirement that all federal actions undergo *prior* environmental review. Because there is no current NEPA-compliant decision authorizing overflights by aircraft other than A-10s, the No Action alternative in the current EA has been improperly defined. The only NEPA-compliant OSB program is the one that was in existence in 1978. That, not the program as it existed—*in violation of NEPA*—in 2009, should be used as the No Action alternative. The citizens of Tucson were, and remain, entitled to have the decision to expand the OSB program from a winter only program limited to A-10 aircraft to a year round program involving louder and more dangerous aircraft fully evaluated as NEPA requires.

Once the proper "no action" alternative is included among the range of alternatives, it would also be appropriate to include the possibility of continuing the program at its current level as one of the other potential alternatives. This would allow the Air Force to finally conduct the missing environmental analysis and evaluate the impacts of the decisions to expand the program from where it was in 1978 to where it is today.

3. The Public Process Was Inadequate and Failed To Ensure Full Participation:

The serious deficiencies in the Air Force's outreach to minority and low-income communities affected by the proposed action have already been discussed in the section on environmental justice. We would add to those deficiencies (failure to actually provide the notice stated in the draft EA; failure to provide for translation of any notices of documentation in Spanish) three points related to the public at large.

First, Tucson Forward requested a public hearing during the public comment period. We do appreciate the fact that the Air Force held scoping meetings prior to the preparation of the EA, but we believe the Air Force should have also held at least two public meetings in different areas affected by the proposed changes in the OSB program. There is "substantial environmental controversy concerning the proposed action," especially in regards to the noise impacts of all of the alternatives and the analysis presented in the draft EA. There was and is also "substantial interest" in having such a hearing. 40 C.F.R. § 1506.6(c).

Second, as discussed in the context of noise impacts, the public has, as of this date, been unable to obtain the complete noise analysis upon which this EA is based. The Noise Data Collection Review and Validation Study (ACC 2007) referenced in the draft EA at p. 3-5 as the "2007 Noise Study" is only a collection of aircraft operations data needed to input a noise prediction model. Missing are the resulting NOISEMAP profiles. It is not possible to comprehensively and accurately comment on the noise analysis when documents cited in the draft EA are mislabeled and incomplete and not available on a timely basis to the public.

Third, the draft EA is a highly technical document filled with Air Force jargon that few civilians can be expected to understand. The list of acronyms (draft EA, Section 8.0) is not a sufficient remedy for this problem. For example, when discussing noise impacts, the draft EA fails to explain the meaning of "Runway 12 and Runway 30." Most civilians would assume these are two separate runways. There is no explanation that this is a single runway and that 12

and 30 refer to compass direction. This type of insider jargon appears to be calculated to mislead the public and permeates the draft EA.

III. Given the Potential Significant Impacts, The Air Force Should Prepare an EIS.

Finally, we believe that the potential impacts of the proposed expansion of OSB from a wintertime training program for A-10s to a year round training program that hosts a wide variety of aircraft with significantly greater noise contours requires the preparation of a full Environmental Impact Statement ("EIS"). NEPA requires that an EIS be prepared for all "major Federal actions significantly affecting the ... human environment." *Id.* §4332(2)(C). In certain circumstances, agencies may first prepare an Environmental Assessment to make a preliminary determination whether the proposed action will have a significant environmental effect. 40 C.F.R. §1501.4. "If the EA establishes that the agency's action '*may* have a significant effect upon the ... environment, an EIS must be prepared." *Nat'l Parks & Conservation Ass'n v. Babbitt*, 241 F.3d 722, 730 (9th Cir. 2001) cert. denied, 534 U.S. 1104(2002).(quoting *Found. for N. Am. Wild Sheep v. United States Dep't of Agric.*, 681 F.2d 1172, 1178(9th Cir. 1982))(emphasis and alteration in original).

Some of the factors considered in determining whether or not a project "significantly" affects the human environment include the existence of impacts to: (a) public health (b) public safety; (c) unique characteristics such as proximity to historic or cultural resources; (d) whether or not the effects are highly controversial; (e) whether the action is related to other actions with cumulatively significant impacts; (f) the degree to which the action may adversely affect sites . . . in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant . . . cultural, or historical resources ; (g) the degree to which the action may adversely affect an endangered or threatened species or its habitat; and (h) whether the action threatens violation of a Federal law or requirements imposed for the protection of the environment See 40 C.F.R. § 1508.27.

A party seeking to show that an agency should have prepared an EIS instead of a FONSI "need not demonstrate that significant effects will occur," but rather must show only that "there are substantial questions whether a project may have a significant effect of the environment." *Anderson v. Evans*, 350 F.3d 815,831 (9th Cir. 2003).

Here, there are a number of factors that support a finding that the proposed expansion of OSB is a "significant" action and requires an EIS. The proposed expansion of the OSB program from what was first approved in 1978 to a year round program involving a wide variety of aircraft that pose significant noise and safety issues represents a huge impact to all of the Tucson citizens who live and work in the central city. Several of the neighborhoods impacted by the expanded program are designated historic properties. Moreover, the cumulative impact of the expanded program when combined with Davis Monthan and TIA flights will result in significant impact to the community. Under these circumstances, the Air Force's FONSI simply cannot be and is not supported by the EA.

Comment Letter re OSB EA

Sincerely,

Tucson Forward, Inc.

Terri Mary Terry Schiltz President

Arizona Center for Law in the Public Interest

Q 1 12 (

Joy E. Herr-Cardillo Staff Attorney

Exhibit 1

Santa Monica Airport Health Impact Assessment (HIA)

A health-directed summary of the issues facing the community near the Santa Monica Airport

February 2010

Written by UCLA CHAT PGY-2 Pediatric Residents

Adrian Castro, M.D. Leian Chen, M.D. Bianca Edison, M.D. Johnny Huang, M.D. Kiran Mitha, M.D. Melissa Orkin, M.D. Zarin Tejani, M.D. Diana Tu, M.D. Lindsay Wells, M.D. Joanna Yeh, M.D.

Supervised by UCLA Department of Pediatrics Faculty

Alma Guerrero, M.D., MPH Alice Kuo, M.D., Ph.D. Shahram Yazdani, M.D.

© copyright 2010

<u>Authors</u>

We are pediatricians currently in our residency training at the UCLA Medical Center. We are members of UCLA CHAT (Community Health and Advocacy Training) program and as part of this training, we participate in community service-learning opportunities to improve children's health. As part of our community service-learning opportunity on environmental health, we evaluated the health impact of the Santa Monica Airport on the surrounding Santa Monica and Los Angeles communities. Many members of these communities seek care from our medical clinics, and we have a vested interest in their health and well-being. This project was supervised by faculty from the UCLA Department of Pediatrics. None of the resident authors or faculty received funding or financial support for this assessment nor do they have any economic interests in the Santa Monica Airport.

Methods

This rapid non-participatory Health Impact Assessment was conducted during the month of February 2010. Our research methodology included empirical and scientific literature reviews; review of public standards, regulations and guidance relevant to airport planning and health; the use of expert consultants; review and analysis of public comment and testimony; and participation in community forums and meetings. Our primary resources for the literature review were found via the online databases PubMed, Lexus-Nexus, OVID, and CSA Environmental Sciences and Pollution Management. The expert consultants had expertise in the areas of health effects of jet exhaust, air quality, as well as atmospheric and environmental science.

Executive Summary

The Santa Monica Airport (SMO) has been located within a highly populated urban area for many decades. Nearby residents have long held concerns regarding the impact of the airport on their community. However, due to a recent growth in the number of jet operations, the community is increasingly worried about the health effects of both noise and air pollution on neighboring children and families. It is therefore important to examine how the continuation of current airport activity affects the conditions required for optimal health.

The proximity of SMO to schools, daycare centers, and parks, in addition to residential homes, poses great exposure risks to children and their families. In response to concerns from residents living around SMO, we have developed this Santa Monica Airport Health Impact Assessment (HIA) in order to organize, analyze, and evaluate existing information and evidence regarding SMO's impact on adverse health effects. The report includes an analysis of the impacts on three issue areas: lack of an airport buffer zone, noise, and air quality.

We recognize there is significant public controversy associated with the continuation of Santa Monica Airport activity. Our goal is for the Santa Monica Airport Health Impact Assessment to provide constructive recommendations in the interest of supporting communities that promote health.

Key Findings

- 1. Airport operations, particularly jet take-offs and landing, are contributing to elevated levels of black carbon in the area surrounding Santa Monica Airport. Elevated exposure to black carbon is associated with:
 - increased rates of respiratory and cardiovascular disease including asthma, bronchitis, and increased risk for sudden death
 - irreversible decrease lung function in children
 - increased carcinogenic risk
- 2. Elevated levels of ultrafine particles (UFP) are associated with aircraft operations and jet takeoffs and are found in the area surrounding Santa Monica Airport. Elevated exposure to UFPs are associated with:
 - increased inflammation and blockage of blood vessels in mice models
 - greater lung inflammation with exposure to UFPs than exposure to larger particulates in rodent models
- 3. Elevated levels of polycyclic aromatic hydrocarbons (PAH) are found in the area surrounding Santa Monica Airport. Exposure to PAH has been associated with:
 - increased carcinogenic risk
 - disruption of the hormonal balance in adults.
 - reproductive abnormalities with exposure during pregnancy
 - lower IQ scores in children.
- 4. Levels of noise due to plane and jet take-offs from Santa Monica Airport are above Federal Aviation Airport thresholds. Excessive noise is associated with:
 - hearing loss.
 - higher levels of psychological distress
 - impaired reading comprehension and memory among children.

5. There is no buffer zone between the airport airfield and the surrounding community as observed in many other municipal airport communities.

Recommendations

- 1. Eliminate or significantly decrease the number of jet takeoffs to reduce exposure to both the byproducts of jet fuel exhaust and the loud "single event" noise of jet takeoff.
- 2. Install HEPA (high efficiency particulate absorbing) filters in surrounding schools and residential homes to mitigate the exposure to PAHs and particulate air pollution.
- 3. Enforce Federal Aviation Airport noise thresholds by implementing additional noise abatement strategies such as soundproofing of schools and significantly affected homes near SMO that would protect residents from hearing loss, psychological distress, and learning problems in children.
- 4. Adopt the precautionary principle, given the evidence of the potential harm of UFPs and other byproducts of airport pollution on animal and human health.
- 5. Notify all potential property buyers, residents, and affected community members in the vicinity of SMO of the noise and air pollution health risks.
- 6. Maintain a runway buffer zone of at least 660 meters to protect surrounding residents from the harmful health effects of jet fuel exhaust byproducts during idling and take-off.
- 7. Closure of SMO would eliminate all health risks associated with airport air and noise pollution.

Introduction

History

Santa Monica Airport (SMO) has been a presence in the city of Santa Monica for many decades, serving functions that have ranged from recreational flying to military use. It was originally built in 1919 and named *Clover Field*, which was the home base of the Douglas Aircraft Company. Today, SMO serves as a general aviation "reliever airport" for Los Angeles International Airport (LAX) and is primarily used by private operators. In recent history, a steady increase in the number of jet plane operations has resulted in increased air pollution and noise burden on the surrounding community, resulting in legal action by community members against the City of Santa Monica.

SMO is unique among airports, from a legal and contractual standpoint, as well as from a geographic and operational standpoint. SMO is owned and operated by the City of Santa Monica. In the early 1980s, after a Federal Court ruled against the city's total ban on jet planes, the city initiated efforts to close the airport entirely.[1] However, the Federal Aviation Administration (FAA), along with other aviation interests, threatened suit against the city. In 1984, a compromise agreement ensued, which committed the city to keeping the airport operational as a general reliever airport until July 1, 2015. The agreement also included decibel limits to noise from take-offs and landings and limited the operating hours by instituting a night curfew on departures and a voluntary night curfew on arrivals.[2]

Since the 1984 agreement, SMO has significantly expanded its jet plane operations, increasing from 1,176 in 1983 to over 18,000 in 2004. The number has since decreased to about 16,000 in 2008.[3] The increase in the number of flight operations has been accompanied by an increase in

noise as well as air pollution, creating a greater burden on the surrounding residential communities.[4]

The Affected Community

The airport is located at the southeast corner of the City of Santa Monica with the southern and eastern perimeter of the airport bordered by the City of Los Angeles. An estimated 150,000 residents live within a 2-mile radius of SMO. While the northern edge of the airport is primarily bordered by commercial buildings, residential neighborhoods surround the remainder of the airport. Within a 1-mile radius around the airport, there are at least 9 preschools and daycares, 11 elementary schools, 4 middle schools, 5 colleges or universities, 1 learning center, and 6 parks. Two of these parks are located right on the border of the airport. Clover Park is situated on the airport's northwest border, immediately abutting the path used by planes when taxiing to their gates. On the southeast end of the airport is the Airport Park, which includes an area built specifically for small children.

While reports of odors have come from all areas surrounding the airport[3], North Westdale, the Los Angeles neighborhood immediately downwind of the airstrip, has suffered the most from jet fuel exhaust. The area includes roughly 1,000 homes, with residents ranging from small children to the elderly. There are several daycares in the community, primarily run out of homes, as well as an elementary and middle school.

During the mid 1990s, a few North Westdale residents videotaped footage of jets taking off from the Santa Monica airport and the effect these planes had on the surrounding neighborhood. One piece of footage taken from a resident's backyard shows a jet in close proximity awaiting clearance to take-off. As the jet's engine idles, a trail of black soot blows into the camera's lens and the wind from the jet vigorously sways the surrounding trees. The footage then goes on to show the grass covered in black ash, the resident's overturned patio furniture, and a neighbor's destroyed fence.[3]

Numerous letters complaining about the noise and exhaust from the jets are posted on the website "Concerned Residents Against Airway Pollution," a site created by a Los Angeles based grassroots group to advocate against the SMO air and noise pollution. These complaints date from 2003 to February of 2010 and come from residents who live both across the street from the airport and those residents who reside more than a mile away. Common problems include complaints of the jet exhaust lingering in their yards and penetrating into their homes. Physical complaints include burning of the eyes, nose, and throat and headaches because of the jet exhaust. Many parents report frequently keeping their children indoors due to the overwhelming exhaust and noise. Nearby residents state they are unable to hear their television or have conversations in their homes because of the loud noise from overhead planes. Individuals also report that their sleep is interrupted multiple times, secondary to planes flying overhead as early as 6 a.m. and as late as midnight during all seven days of the week. Lastly, residents express fear regarding the limited amount of space at the Santa Monica Airport and the lack of a buffer/safety zone for planes who runoff the airport runaway, potentially placing nearby communities in danger.[3]

SMO: A unique problem

Legal and Contractual Agreements and City Boundaries

The legal and contractual agreements pertaining to SMO, as well as the airports location within both the communities of Santa Monica and Los Angeles, make efforts to mitigate the burden of noise and aircraft emissions difficult. Such efforts have been countered by the City's claim that it lacks the authority to regulate the airport's environmental impacts due to the terms of the 1984 Agreement as well as the Airport Noise and Capacity Act of 1990 (ANCA), which significantly limits proprietary rights for airport operators. These positions have been maintained despite legal analysis documenting that the city retains proprietary rights over the airport in areas not specifically denied in the 1984 Agreement, which primarily gave the rights over noise regulation to the FAA. Furthermore, the contractual agreement between the city and the FAA prevents the FAA from invoking ANCA to limit the city's rights. Nonetheless, the City has requested numerous times that the FAA impose stricter rules and regulations on SMO, only to be met by inaction from the FAA, which states that their sole charge is "to direct aircraft flight patterns and ensure safe and efficient use of navigable space."[5] The airports location results in divided political representative boundaries on the local, state and congressional levels, thereby also complicating the political process of addressing the airport's impacts.

Proximity to Homes, Parks, and Schools – Lack of a Buffer Zone

The location of the airport contributes to the burden on the community. First, unlike other Los Angeles area airports, there is no buffer zone between the airfield and the surrounding community which, as mentioned above, is primarily comprised of homes, schools, and parks (see Figure 1). On both the western and eastern ends of the runway, planes are separated from houses by only a single street. Moreover, the eastern end of the runway sits on land that is elevated above the bordering street, Bundy Drive. Planes, which primarily idle and takeoff from this eastern end, therefore blow exhaust over the street and directly into the North Westdale neighborhood. Because of this impact, SMO erected a blast wall in 2002 at the eastern end of the runway. However, the community members reported no appreciable benefit from the wall.[6] FAA recommendations for buffer zones do exist and depend on the type of aircraft flying in and out of a given airport as well as their landing and takeoff speeds. However, existing airports are not required to follow these recommendations.[7] Nonetheless, similar municipal airports in the Los Angeles area such as those in Van Nuys and Long Beach do utilize significantly larger buffer zones between their runways and surrounding residences (see Figures 2 and 3). Reviewing maps of the Van Nuys, Long Beach, and Santa Monica airports reveal that the distance to the nearest homes on either side of the runways is 0.2 miles, 0.25 miles and 0.04 miles respectively indicating a 5-fold difference in the buffer zone between SMO and other local existing airports.

Rules regarding proximity to critical jet blast areas for personnel working on airports have also existed in the past. According to a Department of Transportation/FAA interdepartmental memo written in May 1989, "since prolonged exposure to jet fumes is dangerous to the health of personnel working on the systems, it is necessary to minimize this deleterious effect. Therefore, no jet aircraft shall be permitted to park or hold within 300 feet of the ILS [instrument landing system] equipment shelters, the localizer antenna array, or the glide slope antennas." The document also stated that "vegetation growth shall not be permitted to exceed 12 inches in height in the ILS critical areas within 2000 feet of the localizer and 800 feet from the glide-slope

antennas."[8] While this policy has since been amended, such a policy to protect the health of airport personnel raises concern for the safety of residents, many of whose homes currently sit less than 300 feet from both ends of Santa Monica Airport's runway.

The impact of aircraft exhaust on the surrounding community is further exacerbated by flight takeoff procedures at SMO. In 1990, new takeoff procedures required planes taking off from SMO to await permission from air traffic control at LAX because of the convergence of flight paths from these two airports.[9] Local residents have noted an increase in jet emissions due to the idling of jets awaiting permission for takeoff, especially since the idling jets are located close to the east end of the runway when in the hold pattern, and at the eastern most end of the runway during takeoff with the engines facing Bundy Drive and the houses just beyond.[3]

Exposure to Jet Fuel Exhaust

Various studies have examined jet fuel and the exhaust it creates. Jet fuel, supplied by JP-8 and JetA1 fuel for major aviation engines and civil aviation engines respectively, consists of a complex mixture of many components, including napthalenes, diaromatics, cycloalkanes, straight chain alkanes, and branched chain alkanes.[10] The exhaust from jet fuel contains dangerous compounds, including black carbon (BC), particle-bound polycyclic aromatic hydrocarbons (PB-PAH) and ultrafine particles (UFPs).

Researchers have investigated jet fuel byproducts' environmental effects, including air quality. A number of studies find that air quality near major airports can be significantly affected by emissions from air mobile sources. This research becomes increasingly important as the number of jet flights have heavily increased at Santa Monica Airport over the last decade. Eickhoff's study in 1998 looked at mass concentrations of polychlorinated dibenzo-*p*-dioxines (PCDD)/polychlorinated dibenzofurans (PCDF) and particle-bound polycyclic aromatic hydrocarbons (PB-PAH) in jet engine emissions and found that levels were higher during idling and take-off of jet aircraft.[11] Another study looking at the air quality around Zurich airport found that carbon monoxide concentrations in the vicinity of the terminals are dependent on aircraft motions and engine status (idling vs. take-off vs. landing).[12] Westerdahl's research found that concentrations of UFPs were markedly elevated in the vicinity of Los Angeles International Airport, particularly downwind of the takeoff runways.[13]

Even though research studies reveal elevated pollutant concentrations in the surrounding downwind areas around large commercial airports, some questioned if the same would be true for smaller airports. One study at a small regional airport in Warwick, RI that receives primarily commercial aircraft traffic measured black carbon concentrations at five monitoring sites surrounding the airport between July 2005 and 2006. Results from the study suggested "significant positive associations between hourly departures and arrivals at the airport and BC concentrations within the community, with departures having a more substantial impact."[14]

Additional research has been done around the Santa Monica airport indicating the elevated pollutant concentrations associated with smaller airports. The South Coast Consortium of the Air Quality Management District conducted a study of the area exposure to total suspended particles (TSPs), lead, and UFP around Santa Monica and Van Nuys airports.[15] The researchers of this particular study revealed there was no discernible elevation of 24-hour averaged PM2.5 mass.

Significantly higher levels of total suspended particulate lead were found surrounding the airport. The source of lead exposure is primarily due to aviation gas used by piston-engine planes. Immediately adjacent to the takeoff area, lead levels were found to be up to 25 times higher than background lead levels and in the remainder of the residential area, lead levels were found to be 7 times higher than background lead levels. Despite these elevations from baseline, lead concentrations in and around SMO were still below the Lead National Ambient Air Quality Standard (NAAQS), as established by the EPA.[16] Ultrafine particle number concentrations were also found to occur in significantly high spikes during jet departures although there are currently no standard guidelines or regulations related to UFP exposure.

Additional research by Hu et al. 2009 has demonstrated the correlation between UFPs and aircraft activity of the Santa Monica airport.[17] Using electric vehicle mobile platforms, Hu et al. measured real time air pollutant concentrations in the surrounding areas of Santa Monica Airport in 2009. Their research found markedly elevated peak concentrations of UFPs downwind of Santa Monica Airport with an effect extending at least 660 meters downstream in the direction of the wind's trajectory. Aircraft operations led to an increase of 10 and 2.5 times the concentration of UFP over background levels at 100 and 600 meters downwind, respectively. Though aircraft operations did not significantly elevate average BC and PAH levels, spikes in concentration of these pollutants were seen during jet takeoffs. Jet departures showed peak levels of UFP, PB-PAH, and BC elevated by factors of 440, 90, and 100, respectively.[17]

Health Effects of Jet Fuel Exhaust

Given the above findings of decreased air quality from jet fuel emissions, it is important to understand the burden of health risks on the surrounding community. A large body of evidence on the effects of air pollution as a whole has clearly linked air pollution to adverse medical outcomes. However, in recent years, there has been increasing interest in defining the medical outcomes associated with specific components of pollution. As there are documented elevated levels of black carbon, ultrafine particles, and PAH in the neighborhood surrounding the Santa Monica airport, examining the health effects of these pollutants for residents in this community is critical.

Black Carbon

Black carbon is one component of jet fuel exhaust and has the ability to persist in the environment for days to weeks.[18] As mentioned above, black carbon levels correlate with ariport activity, particularly with airplane departures. Multiple studies have linked black carbon to respiratory and cardiovascular disease. A study from the University of Southern California explored the long term effect of black carbon on lung development. In this study, children between the ages of 10 and 18 from multiple communities in southern California were evaluated over an eight-year period. Researchers observed a reduction in both lung capacity and forced expiratory velocity in the first second (FEV₁), both of which are medical measurements of lung function, after prolonged exposure to black carbon and other pollutants. The decreased lung function noted in these subjects held true for individuals without asthma or a history of smoking.[19] Moreover, given that lung development is essentially complete in both girls and boys by the age of 18, this suggests that these changes in pulmonary function are irreversible.

Reduced lung function is a strong risk factor for medical complications and death in adulthood. Given the number of children exposed to jet fuel exhaust in homes and schools around SMO, the health impact from increased black carbon exposure is substantial.

Another study focusing on women residing in urban areas found a correlation between black carbon and reduced lung function. This effect was stronger in the summer months, when people were more likely to spend time outdoors, highlighting the acute effect of increased exposure on pulmonary capacity.[20] The East Bay Children's Respiratory Study demonstrated that even in San Francisco, an area with relatively good air quality, exposure to black carbon was associated with higher rates of asthma and bronchitis in school-aged children. Importantly, this association was stronger for children who had been living in this neighborhood for more than one year, indicating that prolonged exposures may have additive effects.[21] The increased number of flights at SMO is significantly elevating residents' exposure to black carbon and thus the risk of respiratory disease.

Additional studies have investigated the cardiovascular effects of black carbon. One such study found a strong correlation with black carbon and decreased heart rate variability, a risk factor for sudden death. The study also suggests that individuals with a history of cardiovascular problems, such as prior heart attacks, may be especially susceptible to the negative effects of black carbon on the heart.[22] Similar studies have shown the correlation between autonomic tone and black carbon.[23] This highlights the dangers of ambient pollution on cardiovascular autonomic function, particularly given the high rates of baseline heart disease in the general population.

More recent investigations have tied black carbon exposure to increased cancer risks. A study from the University of Milan showed that this exposure was associated with decreased DNA methylation in adult male blood samples. Global DNA hypomethylation has been found in patients with cancer as well as those with cardiovascular disease. In addition, in animal models, changes in methylation were found in sperm cells, indicating that the effects of these exposures could last multiple generations, even in the subsequent absence of the pollutant.[24] Another study evaluated the effects on black carbon on markers of inflammation, specifically soluble Vascular Cell Adhesion Molecule (sVCAM-1). The authors noted larger effects in obese individuals.[25] These studies propose mechanisms for environmental pollutants to cause long-lasting genetic changes and to predispose individuals to common multi-factorial diseases.

Ultrafine Particles

Along with black carbon, jet fuel exhaust contains particulate matter. There is strong epidemiological evidence linking the particulate components of air pollution to adverse human health effects. Particulate matter (PM) is composed of compounds varying in size, concentration, number, and chemical composition. The size of the PM is categorized according to their aerodynamic diameter PM 10 ("thoracic"), PM 2.5-10 ("coarse"), PM 2.5 ("fine") and UFP ("ultrafine particles", <0.2 micrometers). The numbers reflect maximum diameter, such that PM10 includes smaller particles like PM2.5 and UFP. Likewise PM2.5 as a class includes UFP. Multiple studies have been done linking the larger particulates with adverse health effects; studies involving ultrafine particles are emerging. As mentioned above, levels of UFP were significantly elevated in the community downwind of the Santa Monica Airport.

Exposure to PM10 has been clearly shown to increase morbidity and mortality from respiratory and cardiovascular diseases.[26] PM2.5 (a subset of PM10) are particularly dangerous given the ability of these smaller particles to reach deeper parts of the lungs, and have been shown to have similar adverse health effects.[27] Data from large epidemiologic studies of UFP have yet to be published, largely because scientists have only recently been able to measure these particles. Nonetheless, a growing body of evidence on the pathophysiologic effects of UFP leads us to expect significant adverse effects from exposure to these particles as well. For instance, studies in rodents have shown that UFP exposure results in even greater lung inflammation than does exposure to larger particulates.[28] Furthermore, research examining the interactions between insoluble ultrafine particles and biological systems (such as body fluids, proteins, receptors, and cells), have shown that not all particles deposited in the airway are cleared by the mucociliary transport system. To simulate inhalation of UFPs, test particles were inhaled as an aerosol bolus at the end of a breath of filtered air.[29] The studies clearly showed that the long-term retained fraction in airways depends on the particle size; the smaller the particle, the more the airways retained those particles. In short, residents near the Santa Monica Airport have increased exposure to particles known to be retained in human lungs which can cause significant airway inflammation.

Once retained in the airways, UFPs have the potential to affect other parts of the body. A review article by Araujo and Nel looked at the relationship between particulate matter and coronary artery disease.[30] Several studies showed that cardiovascular outcomes increase when exposures changed from PM 10 to PM 2.5 matter in animal models. Though there are few studies yet available for UFP exposure on human atherosclerosis, recent findings from the Southern California Particle Center (SCPC) are consistent with the idea of UFPs greater proatherogenic potential. Delfino et al. looked at residents in an independent living facility in Los Angeles with a history of coronary artery disease. They found positive associations of particle number and outdoor quasi-ultrafine PM 0.25 with markers of inflammation such as CRP, IL-6, and TNF-II.[31] In an animal study from the SCPC, Araujo et al. exposed mice to concentrated fine particles, UFP or filtered air for 5 hours a day, 3 days a week for 5 weeks. They found that UFP-exposed mice developed 25% and 55% more aortic atherosclerosis compared to PM 2.5 and filtered air-exposed mice.[30]

To explain the pathophysiology of why UFPs might induce blockage of blood vessels, several mechanisms have been proposed including free radical production, oxidative stress, and inflammation. Li et al.'s study showed that ambient UFPs trigger the induction of an enzyme [Nrf-2 regulated heme oxygenase-1 (HO-1)] in macrophage cells (part of the immune and inflammatory systems) to a greater degree than ambient fine or coarse particles.[32] HO-1 is associated with the first tier of defense in macrophages and epithelial cells. They also found that UFPs cause extensive mitochondrial damage in murine macrophages and human bronchial epithelial cells (see Table 4 below). In the study, mice were exposed to either UFP, fine particles or filtered air for 5 hours in a lab located in downtown Los Angeles. Whole-body images were then obtained of the mice after 3 hours and demonstrated that the HO-1 promoter gene was more readily induced in those animals exposed to concentrated UFP. The scans displayed increased emissions both in the chest and abdomen of the UFP exposed mice. Thus, it was postulated that UFPs have greater pro-oxidant effects, as they induce markers of inflammation and free radical production in mice.

There is clear evidence that particle deposition leads to systemic inflammation. However, there is little evidence to explain just how the particles get from the lungs into the bloodstream. Several articles propose mechanisms such as incorporation by alveolar macrophages or diffusion through lung tissue to reach the blood circulation. Unfortunately, no study has convincingly demonstrated the exact route and this area of research must be expanded further to provide the answer. However, it is clear that these particulates are most likely to be retained in the respiratory tract and that they likely have adverse health effects given the data from the previous studies on larger particulates.

Polycyclic Aromatic Hydrocarbons

Polycyclic aromatic hydrocarbons (PAH) are another group of compounds found in jet fuel exhaust found to play a role in air pollution. PAH have been shown to be genotoxic (toxic to genes) and carcinogenic (cancer-causing). They have also been linked to disruptions of the endocrine system.[33] Though most of the research has been done on animal and adult models, some studies have shown that fetuses and infants are more susceptible than adults to the harmful effects of environmental toxicants. Because families live in homes surrounding the Santa Monica airport, the PAH in the air has serious implications for the health of the local children.

Prior laboratory and human studies in Central Europe have linked exposure of PAH during pregnancy to adverse birth outcomes.[34] In epidemiological studies, PAH exposure was associated with fetal growth reduction, including reduced birth weight and birth head circumference and/or small size for gestational age, in black, white, and Chinese newborns living in New York City.[35] In 2006, Perera and colleagues looked at the effect of prenatal exposure to PAH on neurodevelopment outcomes in the first 3 years of life in inner-city children. The mothers who participated in this study all had detectable levels of PAH in prenatal personal air samples. This study was able to show the likelihood that a child would have moderate mental delay at 3 years of age significantly increased as a result of PAH exposure.[36] The infants who had been exposed prenatally to the highest PAH levels scored significantly lower on the mental developmental index at 3 years of age than did those with lower levels of PAH exposure. Among the highly exposed children the odds of having moderate mental delay at 3 years of age were almost three times greater than the odds for children with no PAH exposure. However, this relationship was not seen at 1 and 2 years of age. This suggests that more exposed children are potentially at risk for learning and performing school deficits in their preschool years.

In 2009, Perera et al. followed up their previous study with another look at prenatal PAH exposure and the child's IQ at 5 years of age (same group of children studied in the 2006 study).[37] 249 children with PAH exposures ranging from 0.49 ng/m³ to 34.48 ng/m³ were studied. A total of 140 children were classified as having high PAH exposure (greater than 2.26 ng/m³). The results of this study found that women with high exposure to PAH during pregnancy were more likely to have children with lower verbal and full-scale IQ scores when tested at age 5. The IQ scores were 4.67 points and 4.31 points lower for high- vs. low-exposure children. This again has implications for future learning and school performance deficits in these children exposed to PAH during pregnancy.

Carcinogenic Risks

The multiple studies on the health hazards of black carbon, particulate matter, and PAH highlight the key concerns surrounding the Santa Monica Airport, as the rapidly increasing number of flights from SMO exposes residents to these toxins in ever-increasing quantities. Moreover, there are additional harmful effects of airport pollution, such as an increased risk of cancer. A health risk assessment conducted in 1993 for the U.S. Environmental Protection Agency (EPA) reported that aircraft engines are responsible for approximately 10.5 percent of the cancer cases within a defined geographic location (approximately 16 square miles) surrounding Chicago's Midway Airport. The authors of the report additionally note that "it is no surprise that emissions from aircraft engines may have a significant impact on the people living in the study area, especially to people living at receptors adjacent to the airport."[38] The National Resources Defense Council (NRDC) commenting on the U.S. EPA assessment believes that "the same conclusion might apply to people living immediately adjacent to airports all over the country."

In addition, one study in 1999 investigated the health impact of emissions overall from the Santa Monica Airport on the surrounding community. The Los Angeles Unified School District (LAUSD) study found the carcinogenic risk surrounding the airport markedly increased above "acceptable risk". More specifically, "cancer risks for the maximum exposed individual who resides in proximity of the airport were twenty-two, twenty-six and thirteen in one million for the baseline, increased turbojet and piston operational scenarios, respectively. These values represent discrete cancer risks associated with airport related exposures. No background or ambient concentrations were incorporated into the risk quantification. In consideration of the Federal Clean Air Act, emissions associated with airport operations were clearly found to exceed the "acceptable risk criterion" of one in a million $(1 \times 10-6)$." However, the study also found that the short-term (24 hour) and annual PM10 concentrations and lead quarterly concentrations would not exceed national standards.[39]

Although there remains a need for additional investigations to further delineate these risks, it is unwise to ignore the current evidence which suggests that airport-vicinity residents may be predisposed to respiratory, cardiovascular, and oncologic diseases as well as an increased rate of mortality. Using the knowledge we have thus far, we can make policy decisions that would prevent residents from further exposure to toxic pollutants and their negative health effects.

Exposure to Noise Pollution

In the past 30 years, there have been moderate advances in the development of noise policies in airport development, including those implemented at the Santa Monica Airport that attempt to reduce noise by eliminating flights over the residential area at night, checking noise monitors, and setting up a Noise Management Office to handle complaints.[40] While these changes are advances in a positive direction, the amount of noise exposure that remains is not inconsequential and has not been mitigated by these measures. The FAA, in agreement with SMO, currently adopts a noise threshold of 65 dB DNL (day-night average sound level) as compatible with residential areas.[41]

However, problems with this threshold have been identified since 1995, when the National Resources Defense Council found that the 65 dB DNL is based on an averaging of noise that does not account for the loud "single event" noise of aircraft takeoff (such as the 95 dB maximum emitted by a jet during takeoff from SMO). Furthermore, this threshold does not take into account the actual impact of this level of noise on the residents in airport communities. One quantitative study on the impact of noise around La Guardia Airport in New York found that residents living near the airport were exposed to up to four times the amount of noise as people in otherwise comparable communities; over 55% of residents living along the flight path were bothered by aircraft noise, with the majority of those residents living in areas exposed to less than 65 dB DNL.[42-43] Clearly, the 65 dB DNL limit currently adopted by SMO and the FAA does not recognize that this level, although perhaps improved as compared to previous standards, still has both physical and mental health effects on neighboring residents.

One of the efforts made by community airports to help reduce noise has been the practice of soundproofing, which to our knowledge has not been adopted by SMO as it has by other local airports. For example, according to the Los Angeles *Times*,[44] due to an increase in military flights through Long Beach airport, the city council had approved to soundproof homes most affected by the increased noise, including placement of acoustic windows and attic insulation. Another local airport, the Burbank Airport, publishes a Quarterly Noise Monitoring study, which in August 2009 evaluated the noise impact boundaries around the airport and identified 1080 acres of land exposed to 65 dB of noise. According to this study, the Burbank Airport has made attempts to acoustically treat all residences within the 65 dB contour, which included 1446 unit dwellings as of June 2007.[45] Residents near Los Angeles International Airport and Van Nuys Airport are also eligible to participate in a soundproofing effort to decrease the decibels of noise within homes.[46] In the literature, there are no such efforts to aid the residents living near Santa Monica Airport. Soundproofing is one consideration to help mitigate noise exposure around SMO when indoors, but unfortunately does not account for the possible adverse effects of noise pollution when outdoors around homes and parks. Although some regulations and programs are already in place at SMO to help limit noise exposure, further efforts at reduction are indicated given the significant risk of negative health effects of airport noise on surrounding communities.

Health Effects of Noise Pollution

The body of evidence supporting the harmful effects of excess noise on health is strong, especially in regards to its impact on children. As early as the 1980s, research has shown that chronic noise exposure creates both physical and psychological stress that manifests as elevated blood pressure, decreased memory, reading deficits, learned helplessness, and annoyance.[47] Children need quiet and appropriate environments to study and learn. According to the National Institute on Deafness and Other Communication Disorders (NIDCD), which is one of the National Institutes of Health, "long or repeated exposure to sounds at or above 85 decibels can cause hearing loss."[48] Jet plane take-off is up to 120 decibels, far above 85 decibels. Numerous studies have demonstrated that impaired hearing causes learning difficulties. A 2010 study found that primary school students who have poor academic performance are also significantly more likely to have mild hearing loss.[49] Remarkably, another study has suggested that exposure to even 50 decibels of noise in the daytime is associated with relevant learning difficulties in

schoolchildren, well below the noise level of jet plane take-offs. Researchers from this study suggest aiming for noise exposure maximum values of 55 decibels during the daytime in order to protect the more sensitive segments of the population, such as children and the elderly.[50]

Beyond hearing impairment, even those students with normal hearing who are exposed to aircraft noise have been demonstrated to have worse educational outcomes. An extensive cross-national study conducted in Europe showed a direct correlation between exposure to aircraft noise and impaired reading comprehension and recognition memory. Children living and attending school near airports fell behind their peers in reading by about two months for every 5 dB noise increase in their environments. The researchers concluded that "schools exposed to high levels of aircraft noise are not healthy educational environments."[51] A similar study published in 2006 also found that "aircraft noise exposure at school was linearly associated with impaired reading comprehension; the association was maintained after adjustment for socioeconomic variables, aircraft noise annoyance, and other cognitive abilities."[52] Given that reading is a basic building block for continued effective learning throughout life, exposure to airport noise has critical and serious implications for not only short-term but also long-term effects on education and learning in children. Finally, children are not only affected by noise at school, they are also affected within their own homes. A 2004 article showed a significant dose-response relationship between aircraft noise at home and performance on memory tests of immediate and delayed recall. These results "suggest that aircraft noise exposure at home may affect children's memory."[53]

These studies are relevant in the case of SMO because not only are there private homes with children of all ages living right next to the airport, but also there are numerous schools for both children and young adults in the vicinity. There are two schools, Richland Avenue Elementary and Daniel Webster Middle School, that are located less than a ½ mile east of SMO and directly in the flight paths of SMO. Within two miles from the airport are Mar Vista Elementary School, Art Institute of Los Angeles, Walgrove Avenue Elementary School, Mark Twain Middle School, and Santa Monica College. Given the sheer number of students that these institutions serve, thousands of children are potentially being negatively affected.

Studies on the effects of airport noise pollution on adults is much more limited, but at present, a large 6000-subject study, the Hypertension and Exposure to Noise near Airports (HYENA) project, is under way to further delineate the negative health impacts of airport noise pollution on adults, particularly in terms of blood pressure and cardiovascular disease risk.[54] The outcomes from this study may also contribute to the growing body of evidence suggesting the negative effects of airport noise pollution on health beyond learning impairment in children. Regardless of the results of future studies, it is evident from the wealth of existing research that exposure to noise near airports has significant deleterious affects on physical and mental health, particularly for vulnerable populations such as children.

CONCLUSION

This Santa Monica Airport Health Impact Assessment serves to take into consideration scientific evidence concerning the link between public policy and health. While we do not claim to be able to provide definitive answers to all of the concerns raised regarding issues surrounding SMO, we do strive for this HIA to provide beneficial and constructive information to the stakeholders involved in determining SMO's future role in the community.

Key Findings

1. Airport operations, particularly jet take-offs and landing, are contributing to elevated levels of black carbon in the area surrounding Santa Monica Airport. Elevated exposure to black carbon is associated with:

- increased rates of respiratory and cardiovascular disease including asthma, bronchitis, and increased risk for sudden death
- irreversible decrease lung function in children
- 2. Elevated levels of ultrafine particles (UFP) are associated with aircraft operations and jet takeoffs and are found in the area surrounding Santa Monica Airport. Elevated exposure to UFPs are associated with:
 - increased inflammation and blockage of blood vessels in mice models
 - greater lung inflammation with exposure to UFPs than exposure to larger particulates in rodent models
- 2. Elevated levels of polycyclic aromatic hydrocarbons (PAH) are found in the area surrounding Santa Monica Airport. Exposure to PAH has been associated with:
 - increased carcinogenic risk
 - disruption of the hormonal balance in adults.
 - reproductive abnormalities with exposure during pregnancy
 - lower IQ scores in children.
- 3. Levels of noise due to plane and jet take-offs from Santa Monica Airport are above Federal Aviation Airport thresholds. Excessive noise is associated with:
 - hearing loss.
 - higher levels of psychological distress
 - impaired reading comprehension and memory among children

5. There is no buffer zone between the airport airfield and the surrounding community as observed in many other municipal airport communities (See Figure 5)

Recommendations

In the interests of reducing exposure to toxic jet fuel exhaust byproducts and noise pollution and preventing their deleterious health effects, we recommend the following interventions:

- 1. Maintain a runway buffer zone of at least 660 meters to protect surrounding residents from the harmful health effects of jet fuel exhaust byproducts during idling and take-off.
- 2. Eliminate or significantly decrease the number of jet takeoffs to reduce exposure to both the byproducts of jet fuel exhaust and the loud "single event" noise of jet takeoff.
- 3. Install HEPA (high efficiency particulate absorbing) filters in surrounding schools and residential homes to mitigate the indoor effects of pollution
- 4. Implement additional noise abatement policies such as soundproofing of schools and significantly affected homes near SMO.
- 5. Adopt the precautionary principle, given the evidence of the potential harm of UFPs and other byproducts of airport pollution on animal and human health.
- 6. Notify all potential property buyers, residents, and affected community members in the vicinity of SMO of the noise and air pollution risks.
- 7. Closure of SMO would eliminate all health risks associated with airport air and noise pollution.

Figure 1: Santa Monica Airport



Figure 2: Long Beach Airport


Figure 3: Van Nuys Airport



Table 1

Parameter	Coarse (PM2.5-10)	Fine (PM25)	Ultrafine
Size (µm)	2.5 - 10	0.15 - 2.5	< 0.15 µm
Number per µm³	÷	++	+++
Mass (µg) per µm³	***	++	+
Relative content (% of total mass) * Elemental carbon	÷ .	**	***
Organic carbon	•	**	***
PAHs	•	+	***
Metals	+++	**	
Redox activity	¥	**	+++
DTT assay =	•	**	+++
HO-1 Induction#	• •	++	***
GSH depletion #	.+	+++	+++
Mitochondrial damage#	None	Some	Extensive
Surface area	•	++	+++
Bioavailability of active compounds	+	++	+++
Lung penetrability	÷	++	+++

Modified from Li et al [123]. * Relative content was estimated using mass concentration and fractional composition of CAPs collected on Teflon and quartz filters in two locations from the Los Angeles basin as reported [67]. ** DTT assay was performed on similar CAPs samples [67]. # HO-1 induction. GSH depletion and mitochondrial damage were determined in a murine macrophage cell line (RAW 264.7) and a transformed human bronchial epitheliai cell line (BEAS-2B) exposed to similar CAPs samples [67].





REFERNCES:

- 1. Plaintiffs' Position Concerning the City of Santa Monica's Ongoing Legal Right to Regulate Aircraft Operations at Santa Monica Airport. August 17, 2000, Cole et al. vs. City of Santa Monica.
- 2. FG, W., Evaluation of the City of Santa Monica's authority to address environmental impacts from Santa Monica Municipal Airport's operations, in Environmental Law Clinic. November 2006: UCLA School of Law.
- 3. Concerned Residents Against Airport Pollution. Available from: http://www.jetairpollution.com.
- 4. Testimony for Councilmember Bill Rosendahl's Santa Monica Airport Townhall Meeting. January 13, 2010.

- 5. Section on letters from the FAA Concerned Residents Against Airport Pollution. Available from: <u>http://www.jetairpollution.com</u>.
- 6. Friends of Sunset Park Spring 2002 Newsletter. Available from: http://www.friendsofsunsetpark.org/spring2002.pdf.
- 7. *National Business Aviation Association Runway Safety*. Available from: <u>http://www.nbaa.org/ops/safety/runway</u>.
- 8. Department of Transportation/FAA Memo Citing criteria for instrument landing systems. May 26, 1989.
- 9. Santa Monica Municipal Airport Airport History. Available from: http://www.smgov.net/departments/airport/.
- 10. Robinson, P.J., *Pharmacokinetic modeling of JP-8 jet fuel components. I. Nonane and C9-C12 aliphatic components.* AFRL-HE-WP-TR-2000-0046, U.S. Air Force Research Laboratory, 2000.
- 11. Irene, T., *Risk factors of jet fuel combustion products*. Toxicology Letters, 2004. 149: p. 295-300.
- 12. Schurmanna, e.a., *The impact of NOx, CO and VOC emissions on the air quality of Zurich airport.* Atmospheric Environment, 2007. 41: p. 103-118.
- 13. Westerdahl D, e.a., *The Los Angeles international airport as a source of ultrafine particles and other pollutant to nearby communities.* Atmos Environ, 2008. 42: p. 3143-3155.
- 14. Dodson RE, H.E., Morin B, Levy JI, An analysis of continuous black carbon concentrations in proximity to an airport and major roadways," Atmospheric Environment, August 2009. 43(24): p. 3764-3773.
- 15. Fine, P.M., Community-Scale Air Toxics Monitoringssun Valley Neighborhood and General Aviation Airport, in US EPA Air Toxics Data Analysis Workshop Presentation. 2007: Chicago, IL.
- 16. Environmental Protection Agency "Development and Evaluation of an Air Quality Modeling Approach for Lead Emissions from Piston-Engine Aircraft Operating on Leaded Aviation Gasoline" Feb 2010; Available from: http://www.epa.gov/otag/regs/nonroad/aviation/420r10007.pdf.
- 17. Hu, e.a., Aircraft Emission Impacts in a Neighborhood Adjacent to a General Aviation Airport in Southern California. Environ Sci Technol, 2009. 43: p. 8039-8045.
- 18. Ramanathan, V. and G. Carmichael, *Global and regional climate changes due to black carbon.* Nature Geoscience, March 2008: p. 221-222.
- 19. Gauderman WJ, e.a., *The Effect of Air Pollution on Lung Development from 10 to 18 Years of Age.* The New England Journal of Medicine, 2004. 351(11): p. 1057-1067.
- 20. Suglia et al, Association between Traffic-Related Black Carbon Exposure and Lung Function among Urban Women Environmental Health Perspectives. October 2008. 116(10): p. 1333-1337.
- 21. Kim et al, *Traffic-related Air Pollution near Busy Roads*. *The East Bay Children's Respiratory Health Study*. American Journal of Respiratory Critical Care Medicine, 2004. 170: p. 520-526.
- 22. Schwarz et al, *Traffic related pollution and heart rate variability in a panel of elderly subjects*. Thorax, 2005. 60: p. 455-461.
- 23. Adar, S.D. and J.D. Kaufman, *Cardiovascular Disease and Air Pollutants: Evaluating and Improving Epidemiological Data Implicating Traffic Exposure.* Inhalation Toxicology, 2007. 19(135-149).

- 24. Baccarelli, A. and V. Bollati, *Epigenetics and environmental chemicals*. Current Opinion in Pediatrics, April 2009. 21(2): p. 243-251.
- 25. Madrigano et al, *Air Pollution, Obesity, Genes, and Cellular Adhesion Molecules.* Occupational and Environmental Medicine, November 2009.
- 26. Samet et al, *Fine Particulate Air Pollution and Mortality in 20 U.S. Cities, 1987-1994.* NEJM, 2000. 343(21): p. 1742-9.
- 27. California Environmental Protection Agency: "Facts About Particulate Matter Mortality" Available from: <u>http://www.ncuaqmd.org/files/Particulate%20Matter%20Mortality%20Fact%20Sh</u> <u>eet.pdf</u>.
- 28. Oberdorster, G., *Pulmonary effects of inhaled ultrafine partices*. Environ Health, 2001. 74(1): p. 1-8.
- 29. Stahlhofen et al, *Measurement of lung clearance with pulses of radioactively-labelled aerosols.*" J. Aerosol Sci., 1986. 17: p. 333-336.
- 30. Araujo, J. and A. Nel, *Particulate matter and atherosclerosis: role of particle size, composition and oxidative stress.* Particle and Fibre Toxicology, 2009: p. 6.
- 31. Delfino et al, Circulating biomarkers of inflammation, antioxidant activity, and platelet activation are associated with primary combustion aerosols in subjects with coronary artery disease. Environ Health Perspect, 2008. 116(7): p. 898-906.
- 32. Li et al, Nrf2 is a key transcription factor that regulates antioxidant defense in macrophages and epithelial cells: protecting against the proinflammatory and oxidizing effects of diesel exhaust chemicals. J Immunol, 2004. 173(5): p. 3467-348.
- 33. Bostrom et al, Cancer risk assessment, indicators, and guidelines for polycyclic aromatic hydrocarbons in the ambient air. Environ Health Perspect, 2002. 110: p. 451-488.
- 34. Dejmek et al, *The impact of polycyclic aromatic hydrocarbons and fine particles on pregnancy outcome*. Environ Health Perspect, 2002. 108: p. 1159-1164.
- 35. Choi et al, International studies of prenatal exposure to polycyclic aromatic hydrocarbons and fetal growth. Environ Health Perspect, 2006. 114(11): p. 1744 1750.
- 36. Perera et al, Effect of Prenatal Exposure to Airborne Polycyclic Aromatic Hydrocarbons on Neurodevelopment in the First 3 Years of Life among Inner-City Children. Environ Health Perspect, August 2006. 114: p. 1287-1292.
- 37. Perera et al, Prenatal Airborne Polycyclic Aromatic Hydrocarbon Exposure and Child IQ at Age 5 Years. Pediatrics, 2009. 124: p. e195-e202.
- 38. Estimation and Evaluation of Cancer Risks Attributed to Air Pollution in Southwest Chicago Final Summary Report, in prepared for EPA Region 5. April 1993: Chicago, Illinois.
- 39. Piazza, B., Santa Monica Municipal Airport: A report on the generation and downwind extend of emissions generated from aircraft and ground support operations. June 1999, LAUSD Environmental Health and Safety Branch.
- 40. Santa Monica Municipal Airport For Our Neighbors Noise Management. Available from: <u>http://www01.smgov.net/airport/n_airport_o.aspx</u>.
- 41. Girvin, R., Advancing Aircraft Noise Impacts Research: A White Paper. FAA Office of Environment & Energy. Noise Division, August 7, 2009.
- 42. National Resources Defense Council Flying Off Course: Environmental Impacts of America's Airports. October 1996.

- 43. Cohen et al, *Airport-related air pollution and noise*. Journal Occup Environ Hyg, February 2008. 5(2): p. 119-129.
- 44. Long Beach to insulate some homes near airport to curb noise, in Los Angeles Times. October 7, 2009.
- 45. *Quarterly Noise Monitoring at Bob Hope Airport Second Quarter 2009.* Aug 2009.
- 46. Van Nuys Homes to Get Insulation; Airport Project Follws Soundproofing Near LAX, in Daily News (Los Angeles, CA). August 1, 1999.
- 47. Evans et al, *Chronic noise and psychological stress*. Psychological Science, Nov 1995. 6(6): p. 333-338.
- 48. National Institute on Deafness and Other Communication Disorders Noise Induced Hearing Loss. Available from: <u>http://www.nidcd.nih.gov/health/hearing/noise.asp</u>.
- 49. Daud et al, *The effect of mild hearing looss on academic performance in primary* school children. Int Journal Pediatric Otorhinolarygnology, Jan 2010. 74(1): p. 67-70.
- 50. Kaltenbach et al, *Health consequences of aircraft noise*. Dtsch Arztebl Int, August 2008. 105(31-32): p. 548-556.
- 51. Stansfeld et al, Aircraft and road traffic noise and children's cognition and health: a cross-national study. Lancet, June 2005. 365(9475): p. 1942-1949.
- 52. Clark et al, *Exposure-effect relations between aircraft and road traffic noise exposure at school and reading comprehension: the RANCH project.* Am J Epidemiol, Jan 2006. 163(1): p. 27-37.
- 53. Matsui et al, Children's cognition and aircraft nosie exposrue at home: the West London Schools Study. Noise Health, Oct-Dec 2004. 7(25): p. 49-58.
- 54. Jarup et al, Hypertension and exposure to noise near airports (HYENA): study design and noise exposure assessment. Environ Health Perspect, Nov 2005. 113(11): p. 1473-1478.

Exhibit 2

From: <azbride@cox.net>
To: <355WGPA@dm.af.mil>
Cc: <mayor1@tucsonaz.gov>; <ward5@tucsonaz.gov>
Sent: Tuesday, October 02, 2012 10:14 AM
Subject: OSB EA COMMENT SUBMITTAL

Dear Sirs,

Regarding the Draft OSB EA from July 31, 2012, I strongly disagree with your Finding of No Significant Impact regarding your alternatives mentioned in this Draft EA.

In this particular e-mail are my own personal remarks. I will also be doing a separate e-mail from the Julia Keen Neighborhood Association of which I am Co-Chair.

There are too many things to mention that are wrong with this EA, from it not being understandable to most of the public, to having half-truths, mis-leading information, and fake noise information (not real), and missing aircraft listed in your EA. No Spanish translation in a timely manner, until it is just about too late, and then only three pages are translated with no meetings or other public information for the Spanish-speaking people, and you have the nerve to say that you are providing this translation as a "convenience." Have you not considered that it might be required by Law. It has been difficult even discussing these issues with Engish-speaking people. I strongly request that an EIS be done.

I personally love America, am patriotic, and appreciate all branches of the military. And please remember why we have a military at all. I may not have the official statement of why the military exists, but they are supposed to protect America. We in Tucson, Arizona are not being protected by some of the missions of DM AFB when they are destroying our health, family, property, pets, sanity, schools, tourism, and so on and so forth by flying directly over us, especially in the present flight path.

I am writing to give you my personal experiences that dramatically and SIGNIFICANTLY IMPACT me and even some of my neighbors by the DM AFB OSB and other missions as well from DM AFB.

My name is Rita B. Ornelas, living in the flight path directly northwest of the DM AFB runway, in the Julia Keen neighborhood, since 1985. First, I did not decide to buy a home in the direct flight path of DM knowingly; rather a friend of mine died and her son asked me to buy the house. I had never owned a house, and did not think I could afford one, but everything worked out and I was able to buy it. I have lived in Tucson since 1965, and had been here in the 1950's yearly for summer vacations, so I knew that airplanes flew in Tucson, I graduated from Tucson High School in 1967 and planes disrupted teaching, and then attended the U of A for four years and planes disrupted to be working in the old Student Union at the U of A when that jet crashed in 1978. I heard the awful winding down noise of the jet, I saw the students through my window looking up, paralyzed by what they were seeing, then I saw the shadow of the jet fly over us. We ran towards the large windows facing the UA Mall, we thought this jet was going to crash on the Mall, we then saw the black smoke and we saw the pilot, who had ejected, coming down in his parachute. I have never been able to get that sound and sight out of my mind. Even now, when I hear that kind of sound winding down, I cringe.

Now I'm retired and still live here, and have seen many changes, especially since 2004 when our Julia Keen Elementary School was closed in order to save DM AFB from being closed, and because it was said that a new generation of planes was coming but would be many years before they would be perfected because they were too loud. Here we are in 2012, some of these planes have been brought in and are a great problem, and some are still being worked on with many problems and very much money being spent. They new generation of airplanes are a problem not only to the Julia Keen neighborhood, but to many other neighborhoods, schools and businesses. Many people in this neighborhood do not want to move or cannot move, it is not fair that we should be subjected to such a terrible situation by the Air Force, when they should be protecting us, not harming us. It is too late now, but why would the City of Tucson allow the encroachment around DM AFB that has happened throughout the years. I also have understood that where I live, it used to be military housing at one time, in fact the Julia Keen Elementary School was built using federal funds apparently because it was intended for military students. When did this change come about? I have been here since 1985, and my friend had been here since at least 1971, when I met her.

Here are some of my experiences that have SIGNIFICANTLY IMPACTED me (there are hundres of examples, but I will only share a few with you at this time):

1. This past week, some jets have been flying that look like they have some kind of rockets or bombs on them, I do not know their names yet, I did call the DM Noise Complaint line about them and asked for a return call as to what they are called., I have not gotten a return call yet. I was out throwing the trash in the alley by my backyard, when I heard the noise of jets. I quickly tried to come inside, but I saw it was too late and had to put my fingers in my ears, and I watched them flying in the circular turn, there was two of them, very, very loud, they hurt my ears, even with my fingers in my ears. They shake my body by their horrendous vibrational noise. I watched as one flew over the neighborhood one-half block east of me, and the second one flew right over me going towards the runway to land. It happened twice in a matter of about five minutes. Four jets, two at a time, whether it was the same jets or not I don't know. It was very upsetting and I called the Noise Complaint line. This time I happened to be outside, my husband usually throws the trash, but he has been sick for three weeks.

2. Which bring me to my husband being sick for three weeks now. I have talked to my neighbor who said he has seen some kind of black stuff coming down from the planes flying over our homes. I also spoke to a woman near the Air National Guard who is also in the flight path where F-16's fly over her house, and she said that lately she has noticed some kind of black oily

stuff accumulating on her vents in her home, they have cleaned the system and put in filters, and the black oily stuff still comes out, and even some kind of very small plastic-like particles. I then relayed to her that I have some black stuff on top of my vents and onto the ceiling, as she said she does also, and I have cleaned it periodically with a broom, and we are breathing whatever it is, We have also cleaned our vents out and even painted the rooms, and still, the black stuff accumulates. We were comparing notes and thought perhaps this has something to do with the jets flying over our homes. We would like this black stuff analyzed to determine what it is. Is this making us sick? I personally experience that when I go to other parts of Tucson, like near the beautiful Catalina Mountains and out to Oro Valley, I can breathe better and feel better. I hate to go home, and when I return home, again it is difficult to breathe clearly; but we have lived here so long that we may have gotten used to it, but we don't notice it until we go elsewhere and then return. I would like to request that the Air Force look into what this black substance is, in order to determine if it is from the jets or something else.

3. My husband and I have personally experience the noise and affects to ourselves and our home from the F-22. The first time was during the Heritage Training and Certification held at DM AFB in March 2012. It was a Sunday morning, between 11:00 am and noon, when all morning and all week we had experienced many different types of planes flying all over and over our homes, when suddenly we heard a tremendous noise on top of our roof, as if an Army Tank had been dumped onto the top of our roof, the ceiling cracked and creeked for days, I thought the roof was going to cave in. I was very shook up by this, and my dog jumped into my arms as I sat on the couch and his heart was pounding hard, and so was mine. My neighbor ran outside to see what had happened, so did my husband, car alarms were gong off all over the place. I sent my husband up to the roof the following day to see if something had fallen on the roof, he said there was nothing there. The very next day I was told it was an F-22. The next day I had a meeting with my neighborhood and I relayed my experience and others mentioned their own experience of that day, one lady thought there was an earthquake going on, the noise woke her up and the apartment was shaking.

4. The second time we experienced an F-22 or something else, maybe a Lancer Bomber, went over our home during the Air Show in April 2012. My husband has only one ear drum and has limited hearing in the other ear, and was looking at the planes outside, I was inside and was very shaken up by so many planes, when he called me outside to see a plane. He said to me, come see this, hurry up, I've never seen a plane like this. So I stepped outside my back door and I could hear the plane coming from afar anyway already, I couldn't see it at first because of our mulberry tree in the backyard, but I could hear it terribly loud, and then I saw it. Oh my, it was so low, it was humongously big, it was very sleek, I saw it from the bottom, it had a long nose and the wings were angled back, and it was slanted sideways; it was coming in to land. It scared me to death, it paralyzed me, I couldn't move, I put my fingers in my ears, my ears hurt terribly, my whole body vibrated from my toes to my head and my heart actually hurt and my ears were killing me, it shot my nerves, and I couldn't move. I thought it was going to come down on us. I then went inside and I was shaking and crying from

the awful experience. I called the Base about 20 minutes later and I was still shaken up, I described the incident to the Noise Complaint line, Master Sgt. Hill. My husband also was affected, even with his poor hearing, he was shaken up as well. It was a terrible week, since the planes practice all week and then perform on the weekend, so we get a double exposure to all the noise and vibrations. That weekend, the day before the Air Show an F-16 caused a sonic boom which was felt in a large portion of the City, it broke windows in many places.

5. Whenever the planes fly over the house, either taking off or landing, it is a terrible experience for us. The noise and thunderous noise and vibrations affect us inside our house: we can't hear the TV, we can't talk on the phone, we can't talk to each other inside the house. It is very frustrating and the noise hurts us. If we are outside when a plane is coming over, we have to wait to talk to anybody and we have to put our fingers in our ears. Many times things fall off our shelves, our walls and ceilings are cracked, we fix them and then again they crack again. I feel that something is happening to the ground, even the floor doesn't seem stable. I feel like the vibrations of the planes is doing something to the ground under the house, and it is also doing terrible things to our bodies, and our emotions, and our health, and our pets. Sometimes when I open the door to go get the mail from the mailbox by the street, I start to go and then I hear a plane coming, and I close the door until the plane goes over, then I go out and get the mail, and sometimes while I am getting the mail another plane comes over. You may not think much about this, but it is very disturbing. The noise and vibrations are so terrible at times that my dog starts barking and also is frightened by the noise. We experience these kinds of things almost on a daily basis and sometimes it is very many times during the day, and now even in the evening, at night and over night and early in the morning too. And when peole come to visit, they are shocked by the noise and vibrations, and ask us how we can stand this.

6. Many of the people in my neighborhood have children, and they like to play outside, sometimes they hear the planes coming over and they start yelling or crying and run inside because of the horrific noise. There are people in the neighborhood who work out of their homes on the phone, and the noise of the airplanes affects their business because they have to yell into the phone to tell their clients to hold on, I can't hear you, an airplane is going over, then they speak, and then it happens again, another plane goes This is very, very disturbing to people that work out of their homes over. on the phone. There is another lady near me that told me about one of many incidents, this particular one was that they were planning to have their marriage ceremony in their backyard. They have a nice house and yard, they were trying to set up for the wedding when five jets flew over in a matter of six minutes and they could not hear or speak, and the noise and vibrations of those was too much for them, they decided not to have their wedding in their backyard. Another neighbor just outside the flight path said that he hears the noise of the planes inside his house, but that recently he has actually seen them flying over his house, and they are not supposed to fly over his house. I tell him that they fly all over the place, they don't have lines in the sky, and they fly all over our neighborhood, not just in the exact flight path. Another neighbor just

outside the flight path did her own sound-proofing of her home and she says it helps some, but she noticed recently much more noise, and wondered how bad it was at my house. And these are just the planes that come in now to DM and to the OSB program, so what will happen if louder and more planes come in? Also, I raised one of my grandchilden for five years, and because of the horrible noise, she would cry and I would have to come up with ideas of how to make her feel better, and I would play a game with her and hold her and try to show that it was OK; but it was not OK, it was awful. Childen are also very, very affected by this awful noise and vibrations.

7. So what will happen if the louder planes come in as part of OSB, such as the F-22 and Harriers, and other un-named planes, and possibly the F-35 in the future. I think that some of our walls will actually tumble down, and what will happen to us inside the house. We will be killed by our roof caving in. The noise of the newer planes is way too loud for human beings to be subjected to these terrible decible levels.

The Draft EA on the OSB does not truly examine the real noise and affects to the PEOPLE and their homes, etc., and does not offer alternatives or mitigation, therefore I believe that an EIS is required. Instead of trying to bring in more and more planes and add night flights, I believe that DM AFB should concentrate more on missions that do not involve more and more loud planes, why don't they upgrade the A-10's and any other planes they use that have proven to be safe flying over Tucson, yes they are also loud, but they are not as loud as the F-16 and other planes that come in, and they seem to fly in much slower and smoother than other planes. I am sure that DM AFB and the Air Force people and the Political Elected Representatives that decide these things can come up with a better plan than what they seem to have in mind.

Your Finding of No Significant Impact is totally wrong, irresponsible, inconsiderate, lacking in significant real true information and noise data. You can't possibly, really believe that adding more planes, or doubling the planes and adding night flights will really give you a Finding of No Significant Impact. Even a child can tell you different, surely you can come up with something better.

Thank you for your time, and I hope that you consider an EIS, or consider doing less missions so that they do not include more and more, louder, and louder, and more dangerous planes right over our heads, over our children, over our homes, our schools, our businesses, our parks, our streets, our grocery stores, everywhere.

I also request a copy of your final decision, please send it to me by e-mail or to my mailing address.

Sincerely,

Rita B. Ornelas and Ruben C. Ornelas 3679 E. 33rd St.

Tucson, AZ 85713 Dated: Oct. 2, 2012 Separate copies will be mailed or forwarded to, as well as to some others as need arises: President Barack Obama Secretary of Defense Secretary of the Air Force Congressman Raul Grijalva Congressman Ron Barber Senator John McCain Senator John Kyl

Exhibit 3



The enclosed Wyle Laboratories Draft Preliminary Study Report titled: "Operation Snowbird Safety Procedures and Operational Study Services" is provided without Air Force comment or endorsement. This draft study report was undergoing review when the contract for the study was terminated in favor of a more comprehensive Environmental Assessment, including established public involvement procedures, under the National Environmental Policy Act. The Environmental Assessment will formally evaluate environmental impacts of the training plan for Operation Snowbird.

Some names have been redacted in accordance with the Freedom of Information Act in order to protect personal privacy interests. wyle

4/15/2010

Operation Snowbird Safety Procedures and Operational Study Services

Preliminary Study Report



without USAF comments

Preliminary Study Report 🔳 2

Table of Contents

Introduction	
PART I – Overview of Operation Snowbird History, Mission and Trai	ining Details
History	
1972	<u></u>
	<u> </u>
-	
1978	
1979	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
1988-1992	
1992	
1995	
1998	<u> </u>
1000	
2000	
2000	
2001	
2002	
2004	
2005	
2007	
2008	
2009	
2010	1
Miccion	
1975	1
1995	
1999	
2000	

Preliminary Study Report 💻 1



	2010	
Tro	aining details	
	1975	
	2001	
	2010	20
PART I	II – Reporting and Analysis of all known OSB Operational Data	
Introdu	uction to OSB EA of 1978	
Operat	ions Data – Noise	22
	1975	22
	1977	22
	1982	23
	1990	23
	1991	23
	1994	23
	1995	23
	1998	24
	2000	24
	2001	24
	2002	24
	2003	25
	2004	25
	2005	
c	2006	
Lor	2007	
X	2008	
1'a.	2009	
\mathbf{V}	2010	
		———————————————————————————————————————

PART III – Safety Precautions Implemented for OSB	
PART IV – Analysis of General United States Air Force (USAF) mishap data from as early as 1975 and a comparison to DMAFB-specific pertinent mishap data	-Q
Analysis	
Class A Mishap rate per flying hour multiplied by flying time (exposure time) = Risk Factor	
Operation Snowbird Risk Factors by Aircraft Type	
355 th Wing Risk Factors by Aircraft Type44	
PART V – Based on available data, recommendations to mitigate perceived quality of life concerns of excessive noise from operations and safety concerns related to perceptions that	
pilots who temporarily train at DMAFB are properly following specific safety precautions	
Summary	
Findings	
Recommendations	
References	

TABLES

Table 1 – USAF Mishap Data and DMAFB Mishap Data, 1975 – 2009
Table 2 – USAF Aircraft Participating in OSB, Mishap Rates, 1975 – 2009
Table 3 – RAF Aircraft Participating in OSB, Mishap Rates50
Draft doculi



Mathdowneet released without the Antion of t

Operation Snowbird Safety endorsemen **Procedures and Operational Study Services**

Preliminary Study Report

In August 2009, Wyle was contracted by the US Air Force to conduct a study of the National Guard Bureau's Operational Snowbird program managed by the 162nd Fighter Wing at Davis-Monthan AFB and prepare a report. The purpose of the study, as defined in the statement of work, is to mitigate on-going public concern over Snowbird operations. The report is offered as a presentation of the facts for the readers – government and citizen alike-to consume. Wyle's vision is this report will facilitate the parties' dialogue in seeking a balance between safeguarding the mission and protecting the environment. The report is attached; it includes:

- PART I. Overview of OSB history, mission, and training details.
- PART II. Reporting and analysis of all known OSB operational data from as early as 1975 from available data to current. Data includes aircraft type, sorties, flying hours, flight tracks, noise contours, and reasons for any fluctuations, if provided.
- PART III. Safety precautions implemented for OSB.
- PART IV. Analysis of general United States Air Force (USAF) mishap data from as early as 1975 and a comparison to DMAFB-specific pertinent mishap data.
- PART V. Based on available data, recommendations to mitigate perceived quality of life concerns of excessive noise from operations and safety concerns related to perceptions that pilots who temporarily train at DMAFB are properly following specific safety precautions.

Introduction

The 162nd Fighter Wing (162 FW) Detachment 1 at Davis-Monthan AFB supports "Operation Snowbird", a National Guard Bureau program that has been in existence since 1975. The purpose of Operation Snowbird is to provide support for visiting flying units from the Air National Guard and other units from around the world looking to train and exercise in the optimal weather and flying conditions and ample ranges of Southern Arizona.

PART I – Overview of Operation Snowbird History, Mission and Training Details.

History

1972

The Air Force and Air National Guard Bureau were not able to provide documentation for the official activation or authorization of the Operation Snowbird program. In response to Wyle's requests, the Air National Guard History Office, wrote "We don't have a historical file on this important ANG Exercise.ⁱ" Wyle conducted research at the Air Force's Historical Studies Office at Bolling Air Force Base, Washington, DC. Wyle's research uncovered evidence Snowbird operations began in 1972. The following excerpt was found in Twelfth Air Force's official history: "Operation Snowbird began in 1972 as a series of limited winter deployments to Arizona for selected Tactical Air Command gained Air National Guard units. Air National Guard units from three locations in the U.S. deployed to Davis-Monthan to escape the adverse winter conditions which restrict unit training at their home bases. They travel[ed] as self-contained units with their own maintenance and support people. Davis-Monthan provided the equipment and facilities and support services to all the visiting Air National Guard Units.ⁱⁱ" Wyle's research also revealed Operation Snowbird had a humble beginning. According to an article in *El Tigre News*, the Snowbird operation, "...began as a small operations building and a vehicle maintenance shop on a dirt compound inside a chain link fence..."ⁱⁱⁱ

The lack of official documentation suggests the program started in an informal and ad hoc manner. The lack of formal processes to stand up the unit is reflected in e-mail exchanges written in 2001. In April of that year, an e-mail was sent from National Guard Bureau Director of Programs (XP) to the National Guard Bureau Director of Operations (XO). It read, "I'm forwarding for DO [XO] action the Mission proposal by the State of Arizona to formalize the Snowbird Operations at DM, Arizona. As you remember by your participation, the Panel felt this was a day to day operations action and not a new mission. Although active for several years, the State still does not have a formal manning document establishing the unit which they are proposing as a detachment.^{iv}" The e-mail went on to state, "The state submitted a very comprehensive review of the current snowbird operation and their recommendation to formalize this action. Key aspect is to validate the requirement for the snowbird function and corresponding[ly] develop a manning document to meet that requirement." Two months later, in June, the then Operation Snowbird commander wrote the following to the Air National Guard Bureau: "I would look forward to an audit, SATAF, or any other vehicle that will help formalize a mission that has been taking place since 1975."

Also in 1972, **Mathematical Association**, a civilian living in Tucson, begins writing federal, state and local officials regarding the "noise and warning of the potential danger of the approach to Davis-Monthan.^{vi}"

Based on a number of articles, Operation Snowbird's ad hoc status gave place to an official status in 1975. A 2001 memorandum to the Air National Guard Bureau speaks to an "official" start date; it read, "Snowbird has been in operation (officially), since 1975^{vii}. Again, in a 2010 PowerPoint briefing on the unit's mission, on a slide titled "History," a bullet states the unit was, "Established in 1975^{viii}." Lastly, Wyle found the following reference in the Official History of the 162d Fighter Wing: "The 162 Fighter Wing Operation Snow Bird, a deployment support facility located at Davis-Monthan AFB, operated for the Air National Guard Executive Operations Director. Officially in operation since 1975, it was originally set up at the request of National Guard Bureau to provide northern-tier Air National Guard units a place to train during the winter months when their units were essentially locked in by inclement weather."

1978

23 September 1978, Headquarters Tactical Air Command, Langley Air Force Base, Virginia published an Environmental Assessment for Air National Guard (ANG) Snowbird Operation.

According to the Environmental Protection Agency's website, "The NEPA [National Environmental Policy Act] process consists of an evaluation of the environmental effects of a federal undertaking including its alternatives. There are three levels of analysis depending on whether or not an undertaking could significantly affect the environment. These three levels include: categorical exclusion determination; preparation of an environmental assessment/finding of no significant impact (EA/FONSI); and preparation of an environmental impact statement (EIS).

At the first level, an undertaking may be categorically excluded from a detailed environmental analysis if it meets certain criteria which a federal agency has previously determined as having no significant environmental impact.

At the second level of analysis, a federal agency prepares a written environmental assessment (EA) to determine whether or not a federal undertaking would significantly affect the environment. If the answer is no, the agency issues a finding of no significant impact (FONSI). The FONSI may address measures which an agency will take to reduce (mitigate) potentially significant impacts. An EA describes and identifies the following:

- Purpose and need for the proposed action.
- Proposed action.
- Alternatives considered (including the "no action" alternative).
- Affected environment (including baseline conditions).
- Environmental consequences of the proposed action and alternatives.
- Agencies and persons consulted.
- Where mitigation is required, any mechanism (for example, special grant conditions) needed to ensure that mitigation is carried out.

If the EA determines that the environmental consequences of a proposed federal undertaking may be significant, an EIS is prepared. An EIS is a more detailed evaluation of the proposed action and alternatives. The public, other federal agencies and outside parties may provide input into the preparation of an EIS and then comment on the draft EIS when it is completed.^{ix}"

Preliminary Study Report **7**

26 October 1978, an A-7D assigned to the 355th Tactical Fighter Wing crashed short of the airfield when its engine failed while on approach to Davis-Monthan AFB. The pilot ejected and the aircraft crashed into a neighborhood killing two people.

28 October 1978. October 1978 mishap.

16 November 1978. In its reply to **Example 16**, in a letter approved by the White House, the Department of the Air Force stated: "We are continually trying, through operational analyses and cooperative land-use planning, to reduce the risk to the absolute minimum. A number of actions are currently being implemented or are being considered at Davis-Monthan in an effort to reduce the potential for a similar accident in the future:

- The conversion from the A-7 to the A-10 is already underway and will be completed by mid-1979.
- Work with the Federal Aviation Administration (FAA) will continue to insure that air traffic in the Tucson Control Zone minimizes activity over urban areas.
- Use of other airfields in the local area for practice instrument approaches will increase.
- Working with Tucson International Airport (TIA) and the FAA, we are evaluating a 50% reduction of practice instrument approaches to runway 12 by Davis-Monthan assigned aircraft.
- We are looking into doing more training at satellite fields which would not necessitate landings and takeoffs.
- We will continue to work with local authorities to encourage compatible land use planning.
- Several other possible solutions are being explored.
- Change the runway headings. Essentially, there are two parallel runways in the control zones one at Davis-Monthan and another at Tucson International Airport. Reorientation may be feasible; however, it is likely to result in an impact on other sections of the city.
- Reduce the Air National Guard activity at Davis-Monthan. We will explore the possibility of alternate sites and limiting the use of Davis-Monthan to Air National Guard aircraft that are similar to those stationed at Davis-Monthan and would be compatible with Davis-Monthan operations. The letter closed by saying, "Please be assured that we are concerned about this problem and are working to minimize it within our capabilities. The actions addressed above are being evaluated and/or implemented by Davis-Monthan officials. We sincerely appreciate your interest and are hopeful that you will continue to work with local civilian and Air Force officials on this matter."

1979

According to the History of Twelfth Air Force, "One ARF [air reserve forces] problem developed in 1979 over Operation Snowbird. Under this program, northern tier based ARF units received two weeks of winter training at Davis-Monthan AFB in Arizona. The opposition was based upon a claim of overcrowded air space in the Tucson area, and this opposition was undoubtedly strengthened by memories of a 1978 crash of an A-7 in Tucson which had killed two women."

The History goes on to say, "As early as 3 October 1979, the National Guard Bureau found it necessary to deny rumors that the Fiscal Year 1980 Snowbird program was being changed." It

added, "By 9 October 1979, however, Twelfth Air Force was in fact offering alternative sites to Tactical Air Command. During a 30 October 1979 meeting at the Air National Guard Support Center at Andrews Air Force Base, there was established a revised Snowbird program which moved a number of units to two other Twelfth Air Forces bases—George and Luke. This solution reduced the number of Snowbird aircraft at Davis-Monthan by 30%. In addition, by substituting two A-10 units for A-7 units, it reduced the number of participating A-7 units from five to three, thus affording the local citizenry the additional security of two-engine planes overhead. This solution received a favorable reaction from the local press.^x"

31 March 1979, the University of Arizona released a report titled, "Air Traffic." The report noted, "The diversity of public attitudes in Tucson regarding DMAFB's presence and activities is impressive. It appears that the central and most common position is the realistic perception that the presence of DMAFB has a risk-benefit tradeoff." The report later said, "We believe that the risk side of the relation has increased to an unacceptable level, and some reasonable degree of reduction in risk is called for." It went on to say, "The reduction of risk is an apparent common objective of all participants in the planning of revised procedures. However, one notes the absence of a unanimously acceptable, quantitative definition of "risk."

"In summary, it is clear that revised procedures, practices, and facilities must be developed in order to reduce both risk and annoyance for the-residents of Tucson while still allowing the basic missions of DMAFB and TIA to be accomplished successfully. It is also clear that the impetus for development of these revisions came only as a result of public clamor following an urban accident. One cannot escape the conclusion that, in the absence of some sustained external force favoring minimum public risk, air traffic practices that are not maximally oriented to the public safety and comfort will once again evolve. It is predictable that public outcry will arise whenever an accident impacts the urban area. All concerned might be better served if procedural matters were routinely subjected to quantitative urban risk analysis and a history of risk exposure values recorded. Then, even in the emotional climate following an accident, quantitative comparison of present and past values of risk exposure could be made. Again, determining an acceptable definition of risk and a method for calculating risk exposure would appear attractive and useable." The report concluded:

A vocal minority of the community holds the view that DMAFB should cease operations.

A large majority of observers believes that DMAFB can carry out its training mission and substantially reduce military air traffic over the more densely populated parts of the city, especially the low-altitude, high-noise-level traffic. The committee, after an examination of the facts, holds this view. Operation in this manner would be seen by most as a satisfactory solution to the problem of living with an active Air Force Training Base in the corner of one's community. Several other things seem quite clear.

First, increasing urban encroachment upon the DMAFB environs has reached a level which makes the fighter pilot training mission incompatible with acceptable levels of risk if-the activity were to be continued at the DMAFB field exclusively. This constraint upon DMAFB's utility will predictably become worse, not better. At best, the trend may be decelerated only. The participation by city and county governments in a continued IAWG might prompt beneficial action by their respective Planning Departments.

Preliminary Study Report 9

Second, the satisfactory solution referred to above can be accomplished by implementation of the practices, and procedures enumerated in the Recommendations section (below).

Third, when forced by circumstance (e.g., public pressure), the seemingly undesirable or impossible can become workable. An example is the now-proposed greater use of Redington Pass as a flight route into and out of the Tucson valley for military aircraft.

Fourth, sustained minimization of risk for Tucson citizens will require two things; a) a broader view of what constitutes risk, *i.e.*, one more inclusive than the now dominant concern for aircraft separation, and b) the establishment of some permanent mechanism (e.g., the IAWG) to maintain a current quantitative assessment of risk level as time passes and operations change in the long term.^{xi}"

1988-1992

The type of aircraft flying in Operation Snowbird converted from F-100 and A-7 to F-16 during this period^{xii}.

1992

An Air Installation Compatible Use Zone (AICUZ) Study for Davis-Monthan Air Force Base was published. The AICUZ was an evaluation of aircraft noise and accident potential related to U.S. Air Force (USAF) flying operations. On page 32 of the 1992 AICUZ, the Air Force defined its responsibilities:

"In general, the Air Force perceives its AICUZ responsibilities as falling with the areas of flying safety, noise abatement, and participation in the land use planning process.xiii"

1995

Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) for Expansion of National Guard Facilities at Davis-Monthan AFB. According to the FONSI documentation, "The Air Force, in conjunction with the ANG, proposes to construct additional facilities to supplement its existing compound in support of the ANG Snowbird Deployments. The additions will support personnel deployment and include both temporary and permanent facilities. The upgrade involves construction of a modular building of 5,200 square feet for use as an interim facility, pending completion of a permanent, 10,400 square [foot] facility. Two asphalt parking lots, approximately 25,000 and 45,000 square feet, will be constructed to accommodate vehicles for military and civilian deployment personnel. No additional aircraft or flying hours are associated with the proposed action.xiv" The EA package contained a memorandum; its subject was "Number of Snowbird." It addressed Snowbird operations. The memorandum's second and third paragraphs are as follows:

"2. The first year for Snowbird deployments was 1975. Fifteen units deployed that year. The number of Air National Guard units deploying to Davis-Monthan each year has always been between 13 and 15. There has been no indication from the National Guard Bureau that this number will change in the next three years."

3. The facilities for operations and maintenance at Snowbird were built to accommodate the 50 to 85 TDY [temporary duty] personnel associated with the F-100 and A-7 deployments. The F-16

deployment size is usually around 150 personnel because of the increased complexity of the aircraft. The total number of aircraft deployed to Snowbird and the number of flying hours has not changed. The facilities need to be upgraded to support the additional personnel that deploy with the aircraft.^{xv}"

The EA's "Purpose and Need" were as follows: "The ANG has undertaken the Snowbird program providing tactical aircrew training for northern tier units that are weather restricted. Facilities are required for operations, aircrews, and support personnel to conduct exercises and operations. These include combat proficiency of air-to-air with dissimilar aircraft and air-to-ground. Snowbird has been ongoing since 1975, though the type of aircraft used were converted from F-100 and A-7 to F-16 during the period 1988 to 1992; numbers of aircraft, sorties, and flying time has remained virtually constant since the program's inception. Snowbird has had adequate ground support through use of DMAFB blgs [buildings] 1711, 1712, and 4414. However, bldg 4414 is no longer available to the ANG. Bldg 1712 is undersized and marginally able to support a single Snowbird unit deployment. Some 140 members of the ANG, which had been assigned to bldg 4414 during the period from October through May, require additional space since bldg 1712 is already crowded with 140 members present. The proposed additions in the vicinity of bldg. 1712 are for administrative facilities only."

Upgrade of facility is significant to national security, the primary function of the ANG and USAF. xvi"

1995 EA Conclusion. "Based on the findings of the Environmental Assessment, Expansion of the Air National Guard Facility, and adherence to standard operating procedures with regard to site preparation and construction, operation and maintenance, no significant impacts are expected from the proposed action. Further, the action does not constitute a major federal action of significant magnitude to warrant preparation of an Environmental Impact Statement. Issuance of a Finding of No Significant Impact (FONSI) is thus warranted.^{xvii}"

1998

Twenty years after the 26 October 1978 355th Tactical Fighter Wing 'A-7 Mishap, the Tucson Monthly, October 1998, published an article in which the author graphically described the mishap sequence and the resulting deaths .xviii"

1999

Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) for Expansion of National Guard Facilities at Davis-Monthan AFB. According to the FONSI documentation, "The ANG will construct a dormitory complex for 120 personnel, a 2,500 square foot permanent party facility, and a 2,400 square foot maintenance facility to complement its existing compound, as permitted by the US Air Force.^{xix}" The EA described the purpose and need for the above expansion project as follows: "The Arizona Air National Guard (ANG) is also referred to as the 162nd Fighter Wing, and is sometimes informally known as the Snowbird program since units from the northern tier visit during the winter months for training. The ANG, under an outgrant with the USAF, proposes to expand its existing facilities at DMAFB. The new additions will include a dormitory, a permanent party facility, and a maintenance facility."

"The ANG has been undertaking the Snowbird program since 1995 when several facilities were constructed. However, the success of the program is making additional facilities necessary for its continued operation. Specifically, dormitory space for 120 additional personnel is needed along with a maintenance facility of 2,400 square feet, and a permanent party facility of 2,500 square feet.

Upgrade of the facility is significant to national security, the primary function of the ANG and USAF.xx"

Preliminary Study Report = 11

1999 EA Conclusion: "Based on the findings of the "Environmental Assessment, Expansion of the Air National Guard Facility, Davis-Monthan A.F.B. (1995), and adherence to standard operating procedures with regard to site preparation and construction, operation, and maintenance, no significant impacts are expected from the proposed action. An issuance of a Finding of No Significant Impact (FONSI) is thus warranted. This action does not constitute a major federal action of significant magnitude to warrant preparation of an Environmental Impact Statement.^{xxi}"

2000

According to a Talking Paper on "GSU Status for Operation Snowbird" written by the Operation Snowbird commander, **Status 1999**, 5 November 2000, the "AEF [air expeditionary forces] has resulted in dramatic growth at "Operation Snowbird" and change in mission emphasis over past five years.^{xxii}" He added the following bullets:

"-- No longer just a winter-basing site for Northern tier flying units

--- "Spin up" for real world deployments takes place at Snowbird year-round

--- "Paying customers" include USMC, USN, AFRES, USAF, RAF and GAF".

2001

. att dooth

The unit was approved status as Detachment 1, Arizona Air National Guard. During this year, it was reported by the Air National Guard Bureau, "Snowbird is manned by 25 individuals (mixture of full-time and traditional on Special Training days), out-of-hide from the 162d FW.xxiii" In a memorandum to the Air National Guard Bureau, the following was noted:

"- Snowbird is in a building and growth period

-- Early on, they were a 6-month operation during winter months—out-ofhide from the 162 Fighter Wing.

-- Their schedule now shows full 12-month operation. Their operational focus is still 6-month winter training (sortie generation) for fighter wings, however, during their off-season months, they host non-fighter units, non-flying units, Air Force, Air Force Reserve, foreign Air Forces, Marine Corps, Navy, AATC, and AATTC.

-- By the end of September, they will move into a new Operations building.

-- Currently one dedicated dorm (60 rooms, 120 beds). When built (date TBD) four new dormitory buildings will have 156 rooms. Davis-Monthan has signed over land near Snowbird Operations site for new dormitory facilities.

-- Other initiatives include increased ramp space, fuels, and munitions facilities. $^{xxi\nu}$

An article published in El Tigre in March 2002 titled, "The Torch Passes at Snowbird to Pilot," described the growth of Operation Snowbird: "The Operation Snowbird that Wilper commands today boasts facilities for the largely self-contained operation of two simultaneous fighter squadron deployments." Originally opened for Air National Guard annual training deployments for fighter units during winter months, Snowbird now hosts both Air Reserve Force and active duty units from all branches of the military on a year-round basis. Each flying unit brings about 12 aircraft and 150 people. During two week deployment, they will typically fly 200 sorties and drop their annual allotment of ordnance. Pilots typically use the deployment to attain proficiency and currency with live munitions. The Snowbird ramp can hold up to 50 fighter aircraft.^{xxv}"

2004

Air National Guard established a manning document for Operation Snowbird.xxvi

November 2004, Davis-Monthan AFB, Tucson, Pima County Joint Land Use Study (JLUS) published. "The Arizona Department of Commerce (ADOC) completed a Davis-Monthan Air Force Base/Tucson/Pima County Joint Land Use Study (JLUS) in February 2004. The City of Tucson adopted the recommendations from the JLUS into its land use ordinances in October 2004. Pima County also adopted the JLUS recommendations into its zoning ordinances in December 2008."^{xxvii}

2005

26 January 2005, **Secretary of the Air** Force regarding military training. He wrote, "The situation has been worsened as a result of recent action of the Tucson City Council which would result in the construction of thousands of new homes in the south east flight path of DM, thereby completely encircling the base with urban landscape. In addition it is reported that there will be a new generation of planes coming in, even noisier than those now at the base."

"Recently, representatives of at least seven neighborhood associations in the central city have been meeting to exchange ideas about the problem. These neighborhoods were excluded from the Joint Land Use Study (JLUS) even though they are severely impacted by the DM flights. Tucson is the only urban area of its size in the country over which military low altitude training flights occur almost daily. The health and safety problems are obviously of great concern to all of us, not merely those who live in the central and southeast parts of the city but to all who frequent the Campus or other places in the central city."

"We do not ask for closure of the base, but for a reasonable program of mitigation of the problem, so that the city and DM may live together harmoniously and safely. The letter from the Air Force to in 1978 after the tragic crash that year illustrates a constructive response to the problem. The actions of the base at that time were very helpful, but unfortunately with the passage of time, these improvements were not sustained and the situation today is potentially worse.^{xxviii}"

Preliminary Study Report = 13

An Air Installation Compatible Use Zone (AICUZ) Study for Davis-Monthan Air Force Base was initiated to update the 1992 AICUZ Study. In the Draft report, regarding Snowbird Operations, the AICUZ reported: "Operation Snowbird is a National Guard Bureau program that trains at Davis-Monthan AFB and is supported through the 162d Fighter Wing (162 FW). The Arizona Air National Guard (ANG) base in Tucson, next to TIA, is the headquarters of the 162 FW. The AICUZ reported the types of aircraft flown during Operation Snowbird were: A-10, F-15, F-16, and GR-4 aircraft. It added, Snowbird operations are flown year round.^{xxix}" The AICUZ was delayed due to contract problems as well as fighter wing deployments.

355th Wing Commander implemented additional flight safety and noise abatement procedures, the actions included:

- 1. Overhead pattern changed to keep aircraft 86% higher over populated areas
- 2. Aircraft remain 56% higher until within 3 miles from north end of runway
- 3. New procedures published for local and transient aircraft
- 4. Visual approaches no longer conducted from the North, only instrument approaches are authorized from the North
- 5. Helicopter departures re-routed over less populated areas
 - a. Raised altitude to 800' feet (60% increase)
 - b. New published procedure: "Depart helo pad and fly perpendicular to Rwy 12, to cross the extended runway centerline with in the airfield boundary (approx 210 degree heading). Fly this heading until intercept I-10. Fly I-10 until abeam A Mountain, then proceed on course."
- 6. Added procedures requiring that night departures and arrivals be conducted to the southeast to the maximum extent possible. During transition from day to night flying, the SOF will facilitate RWY 12 departures and RWY 30 recoveries when possible
- 7. Published guidance to ensure missions are planned using other airfields for practice approaches to the maximum extent possible. Majority of required practice approaches now occur at airfields other than Davis-Monthan AFB
 - a. Fort Huachuca
 - b. Gila Bend
- 8. Published guidance requiring that noise and safety factors be examined when significant changes to flight operations are considered. These factors will be formally reviewed during the quarterly DMAFB Air Operations Board.
- 9. The 355th Fighter Wing will use the MCRC and other media to publicize significant changes to flight operations
- 10. Revamped website to be more comprehensive and user-friendly with direct links to a calendar, FAQs, maps, other relevant websites.
 - a. Provided a form for submitting comments/questions
 - b. DMAFB link is www.dm.af.mil
- 11. Increased interaction with local media, city, county, state, and federal leadership with regard to the MCRC process
 - a. Published all D-M press releases on the website
 - b. Engaged Tucson Chamber of Commerce, City Council, Rotary, U of A, TUSD, neighborhoods, and a host of other functions as a community partner
- 12. Supported Creation of MCRC
 - a. Actions:Bring together Davis-Monthan AFB, the City of Tucson, Pima County, business and neighborhood interests, and other associations
 - b. Monitor MC3 recommendation implementation
 - c. Share information
 - d. Collaborate for mutually satisfactory solutions

14 November 2008 – DMAFB Environmental Protection Committee recommends Environmental Assessment be prepared.

17 November 2008 – 355 CES/CE-2 prepared an AF Form 813"Request for Environmental Impact Analysis," entitled "Evaluation of visiting aircraft and Operation Snowbird at Davis-Monthan AFB." It was determined that the proposed action did not qualify for a CATEX and that an EA was to be prepared by a private environmental consulting contractor. DMAFB sent the signed Air Force Form IMT 813, and draft Statement of Work, to Headquarters Air Combat Command. The continuation sheet for the Air Force Form IMT 813 stated the following:

"4.0 Purpose and Need for Action

4.1 Purpose of the Action

The purpose of Operation Snowbird is to provide support for visiting flying units from Air National Guard units and other units from around the world looking to train in the optimal weather conditions and ample ranges of Southern Arizona.

4.2 Need for Action

The ANG has utilized DMAFB for cold weather maneuvers for units from other states for over 20 years, often called "snowbird" operations. For c.y. [calendar year] 2007, some 48 F-16 aircraft conducted 832 sorties totaling 1165 hours, 24 A-10 aircraft conducted 287 sorties totaling 486.8 hours, and 9 GR-4 aircraft conducted 123 sorties for 158.5 hours. These figures were approximately 5% of the total number of flights and hours by all aircraft at DMAFB. These figures have been stable in recent years.

5.0 Description of the Proposed Action

The proposed action is to continue Snowbird Operations at Davis-Monthan AFB (ACC), Arizona.

5.2 Description of Alternatives

5.2.1 Alternative A: Relocate Snowbird operations to another USAF facility

5.2.2 Alternative B: Relocate Snowbird operations to Tucson International Airport where the ANG has existing facilities.

5.2.3 No Action. Since Snowbird is ongoing, No Action could be construed as simply allowing it to continue.

5.3 Anticipated Environmental Impact

Expect no adverse impact on the current environment.xxx"

20 November 2008, sent a letter to the Secretary of Defense, The Honorable Robert M. Gates; she also courtesy copied Senator Jon Kyl. **Secretary** letter was signed by 478 citizens of Tucson, Arizona who were concerned about their safety and quality of life due to Operation Snowbird aircraft^{xxxi}.

4 December 2008, Senator Kyl sent a letter to Colonel Michael Chandler of the Air Force Senate Liaison Office. Senator Kyl enclosed **Constant and Stated**, "The enclosed information is sent for your consideration. Please forward to me the necessary information for response to my constituent,

6 March 2009, Lt Gen Harry M. Wyatt III, Director, Air National Guard responded to 2008 letter; General Wyatt sent his letter to Senator Kyl. General Wyatt's letter addressed "the safety and quality of life concerns of the citizens of Tucson, regarding the Snowbird Program based at Davis-Monthan Air Force Base (DMAFB).^{xxxiii}" Among his statements are the following:

"Snowbird has an impeccable safety record and has not had an aircraft loss since its inception in 1975."

"Snowbird is home to major national and international exercises. It averages 1,500-2,000 sorties per year and since September 11, 2001, has provided pre-deployment training for more than fifty units who subsequently deployed to combat operations around the world."

"Although a DMAFB-conducted Environmental Impact Study (EIS) of the Snowbird facilities resulted in no significant findings, an EIS on the noise generated by aircraft operating out of Snowbird is scheduled for late 2009 and will be made available to the Military Community Relations Committee.xxxiv"

25 March 2009, March 2009, Sent a letter to Senator Kyl; her letter responded to Lt Gen Wyatt's 6 March letter. The letter states, General Wyatt's letter was very nice and we do appreciate his commitment to work diligently to improve safety and quality-of-life concerns of the Tucson community. Unfortunately, the General appears to have missed the point of our letter." The letter requests: "We therefore ask your help in having a relatively independent agency such as the DOD Inspector General, review the situation here and have the Secretary's staff sign off on the report.xxxv"

7 May 2009, Lieutenant Colonel Marvin T. Baugh (Deputy Chief, Programs Division and Legislative Division, Office of Legislation, Office of the Secretary of the Air Force) responded to March 2009 letter; Colonel Baugh sent his letter to Senator Kyl. Colonel Baugh claimed, "Over the past several years, the size, number and type of flight operations making up Operation Snowbird have not changed enough to trigger a separate environmental analysis on these transient operations. Operations Snowbird flight operations make up between five and seven percent of the total flight operations at Davis-Monthan AFB. Colonel Baugh also wrote, "The Air Force places great importance on being a good neighbor with nearby communities and in this light, Davis-Monthan AFB, along with the Air National Guard, are already taking the necessary steps to carry out a study of the flight operations associated with Operation Snowbird to validate the statements and concerns raised by and other members of the Tucson community.xxxvi"

26 May 2009, **We were pleased**, and pleasantly surprised, to see that this time Colonel Baugh's 7 May letter. She wrote, "We were pleased, and pleasantly surprised, to see that this time Colonel Baugh did begin to answer our original letter by stating the Air Force would conduct a study of the impact of Snowbird aircraft on Tucson residents. This study comes after 3 years of strenuous denial of any impact of the revised Snowbird Program on the City of Tucson. The letter continued, "An independent study is the first step. There are two additional issues that remain to be addressed. The Air Force itself recognized the over-flight safety problem in Tucson following the DM crash in 1978 near the University of Arizona when it advised the community that the A-10 would replace the A-7 and promised to look into limiting future ANG aircraft assignments to DM. She added, "Lastly, the Neighborhoods have made several suggestions, e.g., that high-risk and noisier Snowbird aircraft be sent to less-encroached nearby fields such as the Yuma Marine Harrier Base or the Gila Bend Air Force Auxiliary Field. Both of these are significantly closer to the critical Barry Goldwater Range than Davis-Monthan AFB."xxxvii"

 \checkmark 29 May 2009 – DMAFB published Sources Sought for Operations Snowbird Safety Procedures and Operational Study Services.

21 July 2009 – DMAFB published Solicitation for Operations Snowbird Safety Procedures and Operational Study Services.

18 August 2009 – Operations Snowbird Safety Procedures and Operational Study Services contract awarded to Wyle.

10 September 2009, Mr. Michael A. Fleishman, on behalf of his clients, sent a letter to the Secretary of Defense, The Honorable Robert M. Gates. Mr. Fleishman's letter referred to 2008 letter. The letter was concerned with "increased safety risks and noise concerns related to the Operation Snowbird program based at Davis-Monthan Air Force Base in Tucson, Arizona. Mr. Fleishman's letter echoed several of 2008 points. For example, he said, "The Air Force promised in its 1978 letter to the Tucson community that the conversion from single engine A-75 to dual engine A-105 would be completed at the Base over the course of the following year. In addition, the letter discussed reducing Air National Guard activity at the Base by limiting the use of ANG aircraft to those similar to the Air Force aircraft stationed at the Base (e.g., the A-105)." He added, "The revamping and expansion of the Program is contrary to the assurances given in the Air Force's 1978 letter. The expansion is also contrary to the current AICUZ, completed in 1992."

Mr. Fleishman quoted a base representative as saying, "The Air Force operations, maintenance, and safety processes all strive to minimize risk but we'll never make it zero." Mr. Fleishman added, "Because the base has experienced severe encroachment by heavily populated neighborhoods and such accident will undoubtedly be catastrophic, as was the accident in 1978. The Air Force recognized the risk at that time and assured the Tucson community that it was committed to limiting future risks. Nonetheless, the revamped Program has increased the risk by bringing in aging aircraft, often non-USAF aircraft ,whose maintenance history and problems are unknown to the Program's operations personnel and whose pilots (foreign and US) do not know Tucson airspace. xxxviii"

October 2009 – DMAFB officials working with Air Combat Command officials decided to postpone release of a new AICUZ study scheduled to be released in November 2009, pending release of this study. According to officials at Davis-Monthan, the Draft 2009 AICUZ was initially delayed due to contract problems and the delay was exacerbated by fighter wing deployments of key personnel. In the end, due to the significant delays in its release, the 2009 AICUZ (2007 data) will require revalidation to current Davis-Monthan operations prior to release.

2010

Operation Snowbird has been in operation for 25+ years; its assets include the following:

- Four acre compound.
- Ramp space for 38 fighters / 12 sunshades.
- 15,000SQ feet of facilities.
- Use of Live Load Area (LOLA).
- Dedicated weapons storage.
- Operation Snowbird's mission and operations will be discussed in the next two sections.

Mission

1975

Operation Snowbird's original mission, as described in the 23 September 1978 Environmental Assessment (EA), was: "During the inclement winter months in the northeastern portions of the United States, Air National Guard units flying tactical aircraft are not able to conduct Tactical Air Command required training, jeopardizing operational readiness. The southwestern portions of the United States suffer from no inclement weather to speak of, and offer the capability for daily flying

Preliminary Study Report = 17

on an almost uninterrupted basis. Tactical ranges and low level flying operations can be conducted with few restraints. Therefore, Operation Snowbird was developed to enable northeastern Air National Guard units to deploy to Davis-Monthan AFB, AZ, with sufficient equipment and personnel to conduct deployed tactical training/operational readiness inspections for two week periods basically between the months of January thru April." xxxix

1995

Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) for Expansion of National Guard Facilities at Davis-Monthan AFB. The EA's "Purpose and Need" were as follows: "The ANG has undertaken the Snowbird program providing tactical aircrew training for northern tier units that are weather restricted. Facilities are required for operations, aircrews, and support personnel to conduct exercises and operations. These include combat proficiency of air-to-air with dissimilar aircraft and air-to-ground. Snowbird has been ongoing since 1975, though the type of aircraft used were converted from F-100 and A-7 to F-16 during the period 1988 to 1992; numbers of aircraft, sorties, and flying time has remained virtually constant since the program's inception.^{xl}"

1999

Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) for Expansion of National Guard Facilities at Davis-Monthan AFB. The 1999 EA described the expansion of the program: "...the success of the program is making additional facilities necessary for its continued operation...xli"

2000

, 5 November 2000, wrote the "AEF [air expeditionary forces] has resulted in dramatic growth at "Operation Snowbird" and change in mission emphasis over past five years.^{xlii}" He added the following bullets regarding Operation Snowbird's mission: "-- No longer just a winter-basing site for Northern tier flying units

--- "Spin up" for real world deployments takes place at Snowbird year-round

--- "Paying customers" include USMC, USN, AFRES, USAF, RAF and GAF"

2010

According to a 2010 Operation Snowbird unit mission brief, mission goals include:

- SUPPORT THE WAR EFFORT
- Maximize "AOR LIKE" training for flying units pre-deployment to Theater
- Irregular Warfare Center of Excellence

The final slide describes Operation Snowbird as: "a tremendous ANG asset on ANG real estate providing some of the best "unit tailored" pre-deployment training in the world."xliii

The 162^d Fighter Wing's website describes Operation Snowbird as, "a National Guard Bureau program located at D-M established in 1975 as a winter deployment site for northern tier ANG flying bases. Six to 12 squadrons deploy for two weeks of training between the months of November through April each year. Each deployment package consists of 24 pilots and 116 support personnel. Ten people from the 162nd FW are assigned as permanent party. Located on four acres of property adjacent to the

north ramp, the compound consists of an operations complex, a maintenance control complex, and a support facility. "xliv

Wyle asked the Air National Guard Bureau for their "corporate view' of Operation Snowbird's mission. The Air National Guard's answer was, "See Memo (dated 06 Mar 09) from NGB/CF, Gen Wyatt to Senator Kyle regarding OSB..."^{xlv} Gen Wyatt, in his 6 March 2009 letter to Senator Kyl, described Operation Snowbird as follows: "Snowbird is home to major national and international exercises. It averages 1,500-2,000 sorties per year and since September 11, 2001, has provided pre-deployment training for more than fifty units who subsequently deployed to combat operations around the world. Snowbird is an indispensible resource in the Global War on Terror and absolutely vital to our Air Force's combat readiness.^{xlvi}"

The most recent and authoritative statement of the unit's mission, as of 14 April 2010, according to the National Guard Bureau, is to:

- a. Facilitate leading edge world class aviation training for US and allied forces for irregular warfare, deployment spin-up, and military exercises/inspections through continuous improvement of training opportunities based on the lessons learned from current military conflicts.
- b. Become the Irregular Warfare Center of Excellence for the Air National Guard
- c. Provide access to a multiple realistic live and inert targets arrays on the Barry Goldwater Ranges
- d. Allow access to the Link 16 and Gateway DATA link architecture in the Southwest US
- e. Support US Military exercises and conferences by providing a quality facility^{xlvii}

Training Details

1975

Operation Snowbird's original training charter was described in the 23 September 1978 Environmental Assessment (EA). It broadly described training as, "During the inclement winter months in the northeastern portions of the United States, Air National Guard units flying tactical aircraft are not able to conduct Tactical Air Command required training, jeopardizing operational readiness. The EA went on to say, "Therefore, Operation Snowbird was developed to enable northeastern Air National Guard units to deploy to Davis-Monthan AFB, AZ, with sufficient equipment and personnel to conduct deployed tactical training/operational readiness inspections for two week periods basically between the months of January thru April.^{xiviii}"

2001

10 September 2001 Air National Guard memorandum described specific Operation Snowbird training areas as: "Snowbird allows ANG Fighter Wings use of the Air Force tactical range complex for.

- 1. Air-to-Air;
- 2. Air-to-Ground;
- 3. Low level routes;
- 4. Live fire (missiles, rockets, and bombs);
- 5. Combat search and rescue;
- 6. Large Force Exercises;
- 7. Night vision goggle training; and
- 8. Precision-guided munitions deliveryxlix".

According to the 2010 unit mission brief, the training is geared to preparing units for war and unique to each deployed unit. The mission brief describes Operation Snowbird's training as: "...unit tailored, pre-deployment training..." It also included the following descriptions: "Maximize "AOR LIKE" training for flying units pre-deployment to Theater.!"

In January 2010, Wyle asked the Air National Guard Bureau what documentation they had regarding Operation Snowbird's training details. The Air National Guard's answer was, "Operation Snowbird has evolved over the years pretty much on a self-governing operation. The units deploy to OSB with similar but different objectives in order to train and prepare for their individual needs."

Framing a question, Wyle stated, "Clearly, OSB's mission has changed." Wyle then asked, "Was the Air National Guard involved in the changes? Did you document the changes? Or did the changes occur in an evolutionary manner and no one noticed the small changes that occurred over three decades?" The Air National Guard answered as follows: "Changes in OSB's original mission statement, from my perspective (a little over a year in the job) was that of an evolutionary manner; as units deployed to SB to fill their training requirements, they added and subtracted mission sets in order to meet their new requirements in an ever-changing real time threat. Even though the training has changed from the pilot's perspective, the flying (admin of departing and arriving) remains the same (unchanged) to the local population in the fact they aren't considering what type of training is conducted, they just notice the airplanes and the by-product...noise."^{li}

Wyle asked the Air National Guard, "How does Operation Snowbird support the ANG mission?" The Air National Guard answered, "Operation Snowbird supports the Air National Guard mission in a multitude of ways; for the Northern Tier units, Operation Snowbird provides a location where an unit can deploy for two weeks to in order to complete RAP [ready aircrew program] training requirements when it would be normally difficult to complete in the home inclement weather. This allows the units to train and complete their taskings which result in their C or Combat status. By maintaining the C status, they stay on track for their current AEF deployments and remain available for any unforeseen contingency operations, therefore increasing the ANG's ability to deploy to any contingency worldwide in support of the Active Duty.^{lii"}

Wyle asked the Air National Guard, "How does Operation Snowbird support the war effort?" The Air National Guard answered: "Operation Snowbird supports the war effort by allowing units to "train to the fight" in an environment similar to the Area of Responsibility while being conducive to increased sortie generation as a byproduct of the predictable and excellent weather that the Tucson area provides. Air National Guard A-10 and F-16 units train to Close Air Support (CAS) scenarios that the United States is currently engaged in overseas like Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF)." Indeed, the unit's war-time training focus is written on its emblem, wrapped around top the Operation Snowbird patch are the words, "Train Like We Fight."

The Air National Guard offered the following illustration of Operation Snowbird's war-time training: "Here is an example of how Operation Snowbird supports the war effort; the 177 Fighter Wing is deploying in March 2010 to OIF (AEF 5/6). This exercise was last minute scheduled due to unit inspection requirements (ORI) in October of 2009 and was executed 3 months later to an incredible result:

177 Fighter Wing Snowbird results: 4 to 15 January 2010

- 109 sorties scheduled, flew 107 Continuation Training sorties (plus 2 incentive sorties)
 - 54 heavyweights employed
 - 34 GBU-12s and 20 GBU-38s
 - Approximately 5,500 round of 20mm Training Rounds
 - 18 pilots participated

0

- 16 made RAP (achieved required training status)
- 16 of 18 pilots dropped three heavy weights each (some dropped 4)

• 16 of 18 pilots executed high angle strafe with the new directed high angle strafe procedures

- 13 of 18 pilots high angle strafed the moving target on Range 3/Enlisted Terminal Area Controller"1iii.

In summary, Operation Snowbird's current mission, according to **Commander**, is to:

- a. Manage a quality Air National Guard flying facility for units, other US services and International allies for Wartime Spin Up and Operational Readiness Inspections preparation
- b. Provide access to a multiple realistic live and inert targets arrays on the Barry Goldwater Ranges
- c. Allow access to the Link 16 and Gateway DATA link architecture in the Southwest US
- d. Support US Military exercises and conferences by providing a quality facility

PART II – Reporting and Analysis of all known OSB Operational Data.

The purpose of this section is to:

1) Collect and analyze all known Operation Snowbird (OSB) operational data from as early as 1975 to current, and

2) Document changes that might affect perceived quality of life concerns due to excessive noise and safety concerns from OSB operations (Wyle SOW, 2009). This section is divided into the following sub-sections:

- a. Introduction to the OSB Environmental Assessment (EA) of 1978.
- b. Operations data for noise.

Specific years of OSB operations data are a mix of fiscal and calendar year timelines and are used interchangeably. Likewise, there are many disparate metrics and definitions used to define the operational data, thus there is often no "apples-to-apples" comparisons.

Introduction to OSB EA of 1978

The Formal Environmental Assessment (EA) for Air National Guard (ANG) Operation Snowbird was prepared for Davis-Monthan Air Force Base (DMAFB) 9 August 1978 (DMAFB, 1978). At the time of preparation, OSB was an "ongoing activity", but there is no date given at which OSB was actually initiated. Documentation from 162 CES/CEE, 15 Sep 95, states that OSB began in 1975.

In reality, the large majority of the impact assessment that was contained in the EA (e.g., air quality, water quality, noise, adverse environmental effects which cannot be avoided, relationship of local, short term use of man's environment and maintenance, enhancement of long term productivity, irreversible and irretrievable commitments of resources involved in the proposed action should it be implemented, considerations offsetting the adverse environmental effects and unresolved issues) dealt with existing OSB flight operations within the Military Training Routes and Military Operating Areas in the local flying area. Very little of the EA dealt with assessing the flight operations of the OSB aircraft flying within the DMAFB airspace, that is conducting arrival, departure and/or pattern operations.

The EA's Project Description section states that during the inclement winter months in the northeastern portions of the United States, ANG units flying tactical aircraft are not able to conduct
Tactical Air Command required training, jeopardizing operational readiness. Therefore, OSB was developed to enable northeastern ANG units to deploy to DMAFB with sufficient equipment and personnel to conduct deployed tactical training/operational readiness inspections for two week periods basically between the months of January thru April. Typically these units were planned to arrive on a weekend and be ready to fly the following Monday.

OSB units were envisioned to fly an average of twenty sorties a day during weekdays in both the A-7 and F-100 aircraft. It was projected that after FY79 the A-10 would replace the F-100. It was also envisioned that for eight weeks of the year, OSB would be supported by ANG O-2 observation aircraft operations, in addition to the fighter aircraft operations. The OSB aircraft were to make standard takeoffs and landings at DMAFB with no low approaches. Flying operations were to be conducted during normal duty hours from 0800-1700 local. Weekend flying was to consist of deployment and re-deployment of both fighter and support aircraft. Support aircraft were defined as C-130s, C-131s, and C-141s. The same Federal Aviation Administration (FAA) Air Traffic Control procedures were to govern the operations of OSB aircraft as they do aircraft assigned to DMAFB.

The EA anticipated an 18 percent increase in the Visual Flight Rule (VFR) traffic pattern operations by OSB aircraft on and in the vicinity of DMAFB. It was also anticipated that the increase would not include any low approaches or instrument flight practice nor transition training, and further that OSB aircraft would only insignificantly add to the overhead traffic pattern.

Operations Data – Noise

Any and all sources of documenting flight operations information were compiled into a spread sheet of relatively comparable data. As mentioned previously, while there are few examples of the same metrics used to describe the flight operations data from 1978 to the present, an attempt was made to categorize the data found. The absence of any information for specific years is indicative of the absence of available data. All the data made available to Wyle is contained in a table at the end of this section. The data spread sheet was used to develop the below word pictures, described by year.

1975

A 1995 document is quoted as saying that Snowbird has been ongoing since 1975, that 15 units deployed that year and that the types of aircraft used were the F-100 and A-7 which were later converted to F-16s.

1977

The 1978 EA states that OSB was developed to enable northeastern Air National Guard units to deploy to DMAFB to conduct deployed tactical training/operational readiness inspections for two weeks periodically basically between the months of January thru April. OSB units were projected to fly an average of 20 sorties a day during weekdays in A-7 and F-100 aircraft. The deployed aircraft were to make standard takeoffs and landings at DM with no low approaches planned. Those operations were projected to occur between 0800 and 1700 hours with weekend flying to consist of deployment/re-deployment of both fighters and support aircraft. An increase in air traffic of about 18% was projected to occur in the VFR traffic pattern and that increase did not include any low approaches or instrument flight practice or transition training.

1982

As reported on an Air Installation Compatible Use Zone (AICUZ) worksheet, 2 Apr 1982, A-7 assumed to be OSB aircraft, flew 537 sorties during February and March and included approximately one pattern per sortie, with half of the patterns being a closed pattern and the other half being radar patterns.

1990

As reported on an AICUZ worksheet, 4 Nov 1989, F-16s were added to the A-7 and A-10 mix of OSB aircraft, and each type of aircraft continued to fly closed patterns. There is no indication of how many total OSB operations were conducted that year; however, the "daily operations" data for A-10s showed a total of 2.962 operations, A-7 aircraft showed a total of 21.252 operations and F-16 aircraft showed a total of 6.322 daily operations.

1990

After contacting AFCEE/TDBS and requesting any AICUZ related information/data for DMAFB, provided "some old NOISEMAP data files for Davis Monthan in our Bernoulli achieves. Most appear to be circa Nov 1989."

The OSB operations numbers reflect the very same aircraft and number of operations down to the decimal as the AICUZ worksheet, 4 Nov 1989. No additional information was gleaned from the AFCEE files.

1991

A revised AICUZ Report was approved 10 Jan 92. Contained in this report were OSB operations numbers from FY91; however, while it is stated that OSB conducted 34 average daily operations during the period 0600-2230 hours, the number of average busy days over which the data is calculated is not provided. Total OSB operations would be 34 average daily operations for 260 average busy days for a total of 8,840 OSB operations for the year. The report does confirm that OSB aircraft consisted of A-10s, F-16s, and A-7s.

1994

During the AICUZ revalidation process, 162 FG/SNOWBIRD provided actual and extrapolated data for FY94 OSB operations. In FY94 F-16 and A-10 aircraft flew 1780 sorties over a five month period which included only 90 flying days. No pattern operations were reportedly flown.

1995

In 1995 an EA and associated FONSI approved construction of additional facilities to supplement the existing compound in support of OSB operations. In the FONSI it is stated that "no additional aircraft or flying hours are associated with the proposed action." The EA acknowledges that while OSB aircraft have changed from F-100s and A-7s to F-16s, it proposes that the "…numbers of aircraft, sorties and flying time has remained virtually constant since the program's inception" although other documentation shows this to be incorrect.

1998

An EA and FONSI for construction of buildings to support the 162 FW, 15 Jun 99, states that "the addition of the facilities will allow 120 Air National Guard members to temporarily reside in the immediate area of their duty stations. These personnel will operate only during the period October through May under the Snowbird program."

This statement shows that by 1998 OSB is no longer a January through April operation but has expanded to eight months of operations annually from October through May.

2000

By FY00 OSB operations have expanded the mix of aircraft involved, now including the HH-60, F/A-18 and C-130, and also the expanded time period of the year when they would be deployed to DMAFB, now through the month of June. No information is available describing the number of sorties flown during 2000.

2001

During 2001 the F-15 is added to the mix of aircraft flying within the OSB program, and the time period expands to include July. The number of sorties flown is approximately 2077, and this is the first time the number of sorties is reasonably documented.

2002

Sources of data for 2002 are the OSB report and the 162FW/LNG FY02-FY05 OSB Master Schedule. While the original purpose statement for OSB was to deploy for two-week periods at a time during January through April, FY 2002 was the first year where OSB operations are documented in the OSB report to have occurred during all 12 calendar months of the year, beginning 9 Sep 01 and ending 30 Sep 02. OSB operations during 2002 also included two new types of aircraft to the OSB mix, the Royal Air Force GR-4 Tornado and the F-3. The number of sorties was not included in the data sheet, but a reasonable guess, based on a similar number of OSB aircraft participating over the year, would be 1600+ sorties.

The 162FW/LNG FY02-FY05 OSB Master Schedule reports the same number of deployments (16) as does the OSB report, but only one of the deployments is duplicated exactly as contained in the OSB report. Similar numbers of sorties and flight hours are reported by each.

As stated previously, the purpose and need statement for OSB has changed over the intervening years since 1978. Although no unbiased/independent source was located documenting such a change, a 25 Mar 2009 letter from **Exercises** to the Honorable Jon Kyl states that in 2002 the type of training provided was changed from maintaining proficiency of winter-bound ANG units to pre-deployment combat training.

2003

Three sources provided data for 2003; the OSB report, the 162FW/LNG FY02-FY05 OSB Master Schedule and the Joint Land Use study. The OSB report included the number of foreign units flying OSB operations expanded to six, including the Royal Air Force (same as 2002), Royal Thai Air Force, German Air Force, and Italian Air Force. Operations were spread over 307 days, which are assumed to include all 12 months of the year, flying 2,135 sorties. No other useful details are provided.

The 162FW/LNG FY02-FY05 OSB Master Schedule includes the dates of deployments, aircraft types, sorties and hours flown and squadron identification. Deployment periods ranged from 3 to 36 days. Sortie counts were 2,198 accounting for 2,825 flight hours.

The Joint Land Use Study (JLUS) document contained NO DATA and continued to state "...OSB deploys six to twelve squadrons for two weeks of training each between the months of November and April each year." The JLUS also states that "in addition to missions flown by Davis-Monthan aircraft, Air National Guard unit, other active duty units and many foreign nations deploy to Davis-Monthan to accomplish their annual live-ordnance training requirements. Davis-Monthan's Operation Snowbird supports this needed training for the Air National Guard, nationwide."

Although the JLUS states that the most recent adopted AICUZ study was prepared in 2002, no such document was found.

2004

Two sources of data are available for 2004, the first being the OSB report and secondly 162FW/LNG FY02-FY05 OSB Master Schedule. The OSB report includes aircraft from the Royal Netherlands Air Force for the first time, in addition to the Royal Air Force aircraft from previous years. Also, for the first time, the P-3 Orion flew in the OSB mix of aircraft. The number of OSB days by units was 261 with an additional 58 days for logistics movement. This brings the total number of days of OSB operations to 319 consisting of 2,070 sorties. A large variety of transport aircraft types were documented in FY 2004 for OSB operations, to include C-130, KC-135, VC-10, DC-9, C-17, A310, B707, and B757.

The 162FW/LNG FY02-FY05 OSB Master Schedule provided similar data, but added details for the 13 documented deployments with beginning and ending dates of each deployment, unit names, type and number of aircraft and generally number of sorties and flight hours. Total sorties were 2,290 consisting of 3,187 flight hours.

2005

. at door

There are two sources of 2005 data; the first is the OSB report and the second is from 162FW/LNG FY02-FY05 OSB Master Schedule. The OSB report adds two new aircraft types to the OSB mix in 2005, the GR-7 Harrier and the GR-3 Jaguar of the Royal Air Force and continues to include the F/A-18 and HH-60. The actual sorties flown was down to 1,583 with 2,213 flight hours, and while the number of days OSB occupied the facilities was up to 327 days, the number of flying days was down to 120. Three new transport aircraft were added to the list of those utilized for carrying associated cargo, the L1011, C-5 and B-737.

The second source (162FW/LNG FY02-FY05 OSB Master Schedule) reported a different aircraft mix from the OSB report, omitting the F/A-18 and HH-60, but contained a similar of sorties of 1,626 and flight hours of 2,186.

2006

The only data available for 2006, which obviously is incomplete, comes from 162FW/LNG FY02-FY05 OSB Master Schedule reporting for the period of 2-15 Oct the 111 FW from ANGB Willow Grove, PA, flying 12 A-10s, conducted 127 sorties for 211 flight hours.

2007

There are three sources of 2007 OSB operations data with the first being an AF Form 813, the second source is an OSB aircraft report and the third is data from a 2007 draft AICUZ document dated Nov 2008. The AF Form 813 summarized the data with an accounting of 81 individual F-16s, A-10s and GR-4s flying a reported 1242 sorties and 1810 flight hours.

The OSB aircraft reports the F-16, A-10, RAF GR-4 Tornado and UH-1, and HH-60 aircraft continued to operate over 12 months of FY07. They flew a record number of sorties (3411) with a total of 4439 flying hours. Deployment periods were reported to have lasted from two weeks to 30 days.

In the 2007 AICUZ data collection document for the DRAFT 2009 AICUZ, total ops reported by DM amounted to 270.27 average busy day operations for 230 flying days a year. OSB conducted 3403 sorties with 287 by the A-10, 24 by the F-15, 2912 by the F-16 and 180 by the GR-4. OSB was flown year round with an average busy day of 18.66 departure and arrival operations; no closed patterns and no operations were reported between 2200 and 0700 hours. Aircraft engine run-up operations associated with OSB were documented for the first time including those of the F-16, A-10, F-15, GR-7, GR-4 and AV-8. Most engine runs were conducted on the Snowbird Ramp and Live Load Area. Their engine powers were limited to 85% with over 85% of the aircraft utilizing the Trim Pad 2 and amounting to 2-3 % of annual DMAFB engine maintenance operations. Maintenance engine operations occurred three times a week for three weeks for a total of nine OSB events. There were no engine maintenance operations reported between 2200 and 0700 hours.

2008

OSB operations were conducted for 11 months of FY08 with the F-16, F-15, Tornado, Typhoon, A-10, HH-60, Puma, GR-7 and GR-9 aircraft. They flew less than half the sorties and flight hours of FY07 with a total of 1,233 sorties and 1,911 flight hours.

In a 10 April 2008 ANG web site news article by Capt Gabe Johnson, 162nd Fighter Wing Public Affairs, **Mathematical**, OSB Commander is quoted as saying "since 9/11, Snowbird and Davis-Monthan have worked together to provide realistic pre-deployment training to Air National Guard, active duty and international flying units..." The article includes statements by individuals from the Royal Air Force's 230 Tiger Squadron discussing the value of pre-deployment training in conditions of high temperatures and soft sand being invaluable to successful operations in Iraq. AF Form 813, 14 Nov 2008, likewise documents the "Purpose for the Action...The purpose of Operation Snowbird is to provide support for visiting flying units from Air National Guard units and other units from around the world looking to train in the optimal weather conditions and ample ranges of Southern Arizona."

2009

OSB was conducted from Oct 08 to Aug 09 of FY09 for deployment periods ranging from two days to 28 days. Puma, Harrier, Tornado and F-16 aircraft from both Great Britain and Belgium were included in

the total OSB mix, along with F-16s, HH-60s, and A-10s from the United States. Combined, they flew a total of 1,190 sorties over 1,757 flight hours.

2010

Similar operations were conducted and estimated for 2010 including foreign services of Great Britain, and, for the first time, U.S. Army AH-64 helos. Operations are <u>projected</u> for 187 days from Oct to July of FY10.

YEAR	MONTH	UNIT	MDS	SORTIES	HOURS	TOTAL DAYS	COMMENTS
FY10	15 Oct - 31 Oct	121 FS (D.C.)	F-16	119	447.3	16	
	4 Jan - 15 Jan	119 FS (N.J.)	F-16			11	$ O^{\gamma} $
	9 Jan - 23 Jan	134 FS (VT.)	F-16			14	
	24 Jan - 6 Feb	112 FS (OH.)	F-16			13	
	6 Feb - 8 Mar	2 SQ	GR-4 RAF			30	
	1 Feb - 28 Feb	162 FW (AZ.)	F-16			27	
	10 Apr - 25 Apr	DMAFB				15	EX Angel Thunder
	1 May - 1 Jul	UK Army	AH-64		\mathbf{C}	61	EX Crimson Eagle
	Total					187	
FY09	2 Oct - 20 Oct	RAF 230 SQD	Puma	48	96.3	18	
	23 Oct - 21 Nov	Belgium AF	F-16	252	426.5	29	
	1 Dec - 12 Dec	Angel Thunder	HH-60	40	44.8	11	
	3 Jan - 10 Jan	127 FW	F-16	26	38.3	7	
	10 Jan - 31 Jan	178 FW	F-16	331	362.9	21	
	16 Feb - 2 Mar	RAF 1 Sqn	Harriers	67	87.1	15	
	12 Apr - 1 May	149 FW	F-16	157	237.5	19	
	6 Jun - 7 Jun	RAF 9 Sqn	F-16	17	20.4	31	
	11 Jun - 7 Jul	104 TH	Tornado	121	229.3	26	
	25 Jul - 7 Aug	188 FW	A-10	131	214.6	13	
	Total	2		1190	1757.7	190	
FY08	4 Nov - 17 Nov	115 FW	F-16	114	161.1	13	WI ANG Madison
	1 Dec - 15 Dec	120 FW	F-16	120	185.5	14	Montana ANG Great Falls
	31 Mar - 11 Apr	131 FW	F-15	111	136.4	12	Missouri ANG St Louis
	13 Apr - 25 Apr	149 FW	F-16	144	227.4	12	TX ANG
	26 Apr - 30 May	RAF	Tornado	173	240.3	34	
	26 Apr - 16 May	RAF	Typhoon	173	252.4	20	
	9 Jun - 20 Jun	104th	A-10C	122	241.3	11	Baltimore Mass ANG
	15 Jun - 25 Jun	101 RQS	HH-60	30	60	40	
5	1 Aug - 5 Sep	230 SQN	Puma	124	248	35	
	8 Sep - 29 Sep	4 SQN	GR7/9	122	158.6	21	
	Total			1233	1911	212	

Preliminary Study Report $\blacksquare 27$

en

YEAR	MONTH	UNIT	MDS	SORTIES	HOURS	DAYS	COMMENTS
CY07			F-16	832	1165		
			A-10	287	486.8		
			GR-4	123	158.5		
	Total			1242	1810.3		
			1 1		1	1	
FY07	15 Sep - 15 Oct	162 FW	F-16	1400	1625	30	AZ ANG
	5 Nov - 18 Nov	178 FW	F-16	142	213	13	OH ANG Springfield
	3 Dec - 15 Dec	180 FW	F-16	160	242.5	12	OH ANG Toledo
	7 Jan - 20 Jan	181 FW	F-16	136	170.5	13	IND ANG Ind
	19 Jan - 4 Feb	158 FW	F-16	152	182.1	15	VT ANG
	5 Feb - 16 Feb	183 FW	F-16	90	137.4	11	ILL ANG Springfield
	18 Feb - 2 Mar	303 FS	A-10	166	305.3	12	Whiteman RES MO
	3 Mar - 15 Mar	172 FW	A-10	121	181.5	12	MI ANG Battlecreek
	15 Apr - 28 Apr	149 FW	F-16	156	239.4	13	TX ANG RTU
	5 Jun - 8 Jun	162 FW	F-16	12	15.2	3	AATC Live Fire
	7 Jun - 20 Jun	Angel Thunder	UH1/HH-	25	50	13	
	25 Jul - 20 Aug	RAF	Tornado	123	158.5	25	14/12 SQDN's
	21 Aug - 31 Aug	162 AATC	F-16	52	73.8	30	
	4 Sep - 1 Oct	162 FW	F-16	676	845	27	
	Total			3411	4439.2	229	
FY07			A-10	287			30 annual flying days
			F-15	24			20 annual flying days
			F-16	2912			100 annual flying days
			GR-4	180			15 annual flying days
	Total			3403			no closed ops
	1		1				
FY06	2 Oct - 15 Oct	111 FW	A-10	127	211		Willow Grove PA ANG
	Total			127	211		
EY05	9.	Y	GR-7 Harrier				
	X		GR-4 Tornado				
	Ch		GR-3 Jaguar				
			F-16				
C	7		F-18				
N			HH-60				
				1583	2213.9	242	
>	Total			1000			

FY05		UNIT	MDS	SORTIES	HOURS	DAYS	COMMENTS
	22 Oct - 7 Nov	1 SQ	GR-7	91	146		RAF UK
							Selfridge MI ANG
	9 Jan - 22 Jan	127 FW	F-16	168	203		VMFA225
	23 Jan - 5 Feb	148FW	F-16	135	229		Duluth MN ANG 179 FS
	6 Feb - 19 Feb	180 FW	F-16	153	174		TOLEDO OH ANG
	20 Feb - 5 Mar	183 FW	F-16	128	150		Springfield IL ANG
	11 Mar - 26 Mar	158 FW	F-16	158	235		Burlington VT ANG
	4 Apr - 16 Apr	182 FS	F-16	171	241		Kelly AFB TX ANG
	20 Apr - 7 May	RAF	GR-3	115	131		RAF
	11 Jul - 5 Aug	RAF	GR-7	274	352		RAF 3, 1, IV SQ
	27 Aug - 30 Sep	RAF	GR-4	233	325		RAF
	Total			1626	2186		
		[CP 7				
FY04			Harrier			K	7
			GR-4 Tornado				
			F-16				
			F-18				
			A-10				
			P3		×		
			AH-1W	S			
	Total			2070	2986.4	261	
5)(04	40.0			0.40	407		
FY04	13 Sep - 31 Oct	6 SQ	GR-4	340	427		RAF UK 2/9 SQ
	26 Oct - 12 Dec	RNAF	F-16	697	937		Royal Netherlands Air Force 3 lines combined
	17 Nov - 19 Nov	AATC	F-16				Tucson AZ ANG
	5 Dec - 7 Dec	MAG11	F-18				USMC Miramar CA
	10 Jan - 24 Jan	148 FW	F-16	135	171		Duluth MN ANG 179 FS
	25 Jan - 7 Feb	114 FW	f-16	209	260		Sioux Falls SD ANG
	8 Feb - 21 Feb	183 FW	F-16	146	191		Springfield IL ANG
	7 Mar - 20 Mar	110 FW	A-10	75	124		Battle Creek MI ANG 172
	17 Apr - 22 May	RAF 12/14 SQ	GR-4	285	374		RAF UK 617/15 SQ
		175 FW	A-10	19	34		Baltimore MD ANG 104 FS
	13 Jun - 27 Jun	110111		110	136		RAF UK
	13 Jun - 27 Jun 24 Jun - 12 Jul	RAF 1 SQ	GR-7	110	100		
	13 Jun - 27 Jun 24 Jun - 12 Jul 31 Jul - 15 Aug	RAF 1 SQ Texas	GR-7 AH-1W	41	211		HMLA773
	13 Jun - 27 Jun 24 Jun - 12 Jul 31 Jul - 15 Aug 4 Aug - 8 Aug	RAF 1 SQ Texas 162 FW	GR-7 AH-1W F-16	41 26	211 41		HMLA773 Tucson AZ ANG 195 FS
	13 Jun - 27 Jun 24 Jun - 12 Jul 31 Jul - 15 Aug 4 Aug - 8 Aug 1 Sep - 1 Oct	RAF 1 SQ Texas 162 FW RAF	GR-7 AH-1W F-16 GR-4	41 26 207	211 41 281		HMLA773 Tucson AZ ANG 195 FS RAF UK

YEAR	MONTH	UNIT	MDS	SORTIES	HOURS	DAYS	COMMENTS
FY03	Total			2135	3586	307	174 flying days
							6 foreign units included
FY03	9 Sep - 5 Oct	13 SQ	GR-4	140	186		RAF UK 31 SQ
	5 Oct - 30 Oct	2 SQ	GR-4	137	167		RAF UK 9 SQ
	2 Nov - 16 Nov	VFMA533	F-18	145	191		USMC Beaufort SC
	1 Dec - 13 Dec	192 FW	F-16	87	113		VA 149 FS
	5 Jan - 18 Jan	180 FW	F-16	205	246		Toledo OH ANG 112 FS
	2 Feb - 15 Feb	122 FW	F-16	140	168		Ft Wayne IN ANG 163 FS
	21 Feb - 14 Mar	RTAF	F-16	68	96		Royal Thailand Air Force
	15 Mar - 27 Mar	132 FW	F-16	104	127		Des Moines IA ANG 124 FS
	31 Mar - 12 Apr	GAF	GR-1	18	18		German Air Force
<u> </u>	13 Apr - 25 Apr	VFA125	F-18	280	365		NAS Lemoore CA
	29 Apr - 23 May	AATC	F-15	32	86	Ň	Tucson AZ ANG
	29 Apr - 23 May	AATC	A-10			CY I	Tucson AZ ANG
	2 Jun - 13 Jun	162 FW	F-16	44	51		Tucson AZ ANG 152 FS
	16 Jun - 20 Jun	AATC	F-16	12	16		Tucson AZ ANG
	25 Jun - 1 Aug	IAF	F-16	550	686		Israel Air Force next three lines combined
	28 Jun - 13 Jul	154 WG	F-15				Hawaii ANG 199 FS
	12 Jul - 26 Jul	144 FW	F-16				Fresno CA ANG 194 FS
	1 Aug - 3 Aug	162 FW	F-16	19	27		Tucson AZ ANG
	17 Aug - 29 Aug	VFA125	F-18	217	282		NAS Lemoore CA
	Total		~~	2198	2825		
	·	•		•			
FY02	9 Sep - 3 Oct	9 SQ	GR-4			24	RAF
	1 Dec - 15 Dec	120 FS	F-16			14	Montana ANG Great Falls 186 FS
	16 Dec - 20 Dec	388 FW	F-16			4	Hill AFB UT 34 FS
	2 Jan - 19 Jan	183 FW	F-16			17	Illinois ANG Springfield 170 FS
	7 Jan - 11 Jan	388 FW	F-16			4	Hill AFB UT 34 FS
	19 Jan - 2 Feb	114 FW	F-16			13	South Dakota ANG Sioux Falls 175 FS
	2 Feb - 16 Feb	110 FW	A-10			14	Michigan ANG Battle Creek 172 FS
	16 Feb - 2 Mar	119 FW	F-16			15	North Dakota ANG Fargo
	19 Feb - 23 Feb	388 FW	F-16			<u>الا</u>	Hill AFB UT 34 FS
.0	2 Mar - 16 Mar	148 FW	F-16			14	MN ANG Duluth 179 FS
5	16 Mar - 30 Mar	121 WG	A-10			14	ID ANG Boise 190 RS
	31 Mar - 13 Apr	140 WG	F-16			14	CO ANG Buckley 120 FS

YEAR	MONTH	UNIT	MDS	SORTIES	HOURS	DAYS	COMMENTS
FY02	10 Apr - 24 Apr	9 SQ	F3			14	RAF
	28 Jul - 29 Aug	9 SQ	GR-4			30	RAF
	1 Sep - 30 Sep	VMFA 533	F-18			30	MCAS Beaufort SC
	Total			1666.430233		239	
					2		,
							Illinois ANG Springfield
FY02	5 Jan -19 Jan	183FW	F-16	165	275		170 FS
	12 Jan - 19 Jan	115FW	F-16				Madison WI ANG 115FW
	19 Jan - 2 Feb	104 FW	A-10	138	262		Barnes MA AND 131 FS
	2 Feb - 16 Feb	110 FW	A-10	146	251		Battle Creek MI, ANG 172
			F 40	105			Sioux Falls SD, ANG 175
	16Feb - 2 Mar	114 FW	F-16	185	223		FS
	16 Mar - 30 Mar	102 FW	Δ_10	139	2/2	0	Boise ID ANG 100 FS
	17 Mar - 22 Mar	124 WG	нн_60	130	10		Moffett CA
	26 Mar - 4 Apr		GR-4	72	105		RAF LIK 617 SO
	1 Apr - 22 Apr		GR-4	102	126		
	17 Jun 28 Jun			54	120		
			011-40		131		IAF 106 FS all sortie/hours lumped for 4
	11 Jul - 30 Aug	8 FW	F-15C	513	572		lines
	21 Jul - 26 Jul	175 FW	A-10				Baltimore MD ANG 104
	27 Jul - 10 Aug	144 FW	F-16				Fresno CA ANG 194 FS
	6 Aug - 9 Aug	162 FW	F-16				Tucson AZ 152 FS
	8 Sep - 20 Sep	VFA146	F-18	36	48		NAS Lemoore CA
	Total			1601	2308		
	1			1	1	1	
FY01	Oct	VMFA 533		212			
	Nov	122 FW		131			
	Jan	110 FW		146			
	Jan	180 FW		115			
	Feb	114 FW		131			
	Feb	148 FW		118			
	Mar	111 FW		108			
	Mar	175 FW		128			
	Mar	129 RQW		41			
	Apr	47 FS		41			
	20 Apr - 27 Apr	162 FW	F-16	34		7	Tucson AZ 162 FS
C	20 Apr - 27 Apr	125 FW	F-15	?		7	
0	30 Apr - 5 May	303 FS	A-10	17		6	Whiteman AFB
3	27 May - 10 Jun	706 FS	A-10	73		13	AFR, New Orleans, LA 926 FW
	1 Jun - 8 Jun	162 FW	F-16	55		7	Tucson 148 FS

YEAR	MONTH	UNIT	MDS	SORTIES	HOURS	DAYS	COMMENTS
FY01	11 Jun - 25 Jun	RS	F-15			14	Roving Sands
	26 Jun - 26 Jul	162 FW	F-16			30	Tucson 162 FS
	26 Jun - 26 Jul	162 FW	A-10	52		30	Tucson 162 FS
	26 Jun - 26 Jul	162 FW	C-130			30	Tucson 162 FS
	Total			2077		158	Ċ
=				[1		
FY00	6 Nov - 20 Nov	124 WG	A-10			14	Idaho ANG
	4 Dec - 18 Dec	114 FW	F-16			14	South Dakota ANG
	8 Jan - 22 Jan	177 FW	F-16			14	New Jersey ANG Atlantic City
	10 Jan - 14 Jan	114 FW	F-16			4	South Dakota ANG, Sioux Falls
	23 jan - 5 Feb	180 FW	F-16			13	Ohio ANG, Toledo
	6 Feb - 19 Feb	120 FW	F-16			13	Montana ANG Great Falls
	7 Feb - 11 Feb	114 FW	F-16			4	South Dakota ANG, Sioux
	12 Feb - 19 Feb	185 FW	F-16			7	Iowa ANG Sioux City
	18 Feb - 21 Feb	122 FW	F-16		CO'	3	Indiana ANG Et Wayne
	20 Feb - 4 Mar	185 FW	F-16			14	Iowa ANG Sioux City
	5 Mar - 18 Mar	110 FW	A-10		×	14	Michigan ANG Battle Creek
	5 Mar - 18 Mar	102 RQS	HH-60			14	NY ANG Suffolk
	5 Mar - 18 Mar	129 FQW	HH-60			14	CA ANG Moffett
	11 Mar - 25 Mar	410 Sq	F-18			15	Cold Lake Canada
	6 Apr - 9 Apr	118 AW	C-130			3	Tennessee ANG, Nashville
	15 May - 31 May	VMFA 232	F-18			15	NAS Miramar CA
	2 Jun - 17 Jun	VMFA 232	F-18			15	NAS Miramar CA
	Total	2				190	
15 100	Oct. May		1		1	1	
15-Juli- 99	OCL - May ONLY"	50					
			1	Γ	1	T	Γ
4-Oct-95	ent re						"no additional flying hours" "number of aircraft, sorties and flying time has remained virtually constant since programs inception"
ci							"no indication from NGB that number of units would change in next three years"
FY94	5 months		A10	196		150	no patterns
	5 months		F-16	1584		150	90 flying days

FY90	MONTH	UNIT	MDS	SORTIES	HOURS	DAYS	COMMENTS
		Snowbirds	A-10				
			F-16				
			A-7				
	Total						260 flying days per year
FY90	30-Jul-90		A-10				Ċ
1100			F-16				
			A-7				20'
	Total						
	[1	1	1	1	C X
FY90			A-10				
			A-7				XU
			F-16				
	Total						
	[includes closed and radar
CY82	Feb and Mar		A-7D	537		41	patterns
							ASSUMED TO BE OSB
							7.5 closed pattern ops
							7.5 radar pattern ops
						•	· · · ·
FY77			A-7				
			A-10				
				<u>></u>			
							no low approaches
FY 77?	Jan - Apr	•	A-7				
FY 77?	Jan - Apr		A-7				normal duty hours 0800-
FY 77?	Jan - Apr		A-7 F-100	20/weekday			normal duty hours 0800- 1700
FY 77?	Jan - Apr eight weeks		A-7 F-100 O-2	20/weekday 1600?	1940?		normal duty hours 0800- 1700
FY 77?	Jan - Apr eight weeks		A-7 F-100 O-2	20/weekday 1600?	1940?		normal duty hours 0800- 1700
FY 77?	Jan - Apr eight weeks	15 units deployed	A-7 F-100 O-2 F-100	20/weekday 1600?	1940?		normal duty hours 0800- 1700

Preliminary Study Report $\blacksquare 33$

PART III – Safety Precautions Implemented for OSB.

Operation Snowbird's historical safety record is superb. In its 35 year history, the unit has never experienced a Class A mishap. Operation Snowbird has a flight safety program to mitigate risks and prevent future mishaps. The unit also embraces Operational Risk Management processes to mitigate risks. The following was posted in clear site at the unit for all to see and follow:

Operational Risk Management - Operation Snowbird, 6 Step Process

- 1. Identify Hazards
- 2. Assess Risk
- 3. Analyze Controls
- 4. Make Control Decisions
- 5. Implement Risk Control
- 6. Supervise & Review

At Davis-Monthan AFB the following noise abatement and safety practices are undertaken for all air operations:

- 1. Airfield departures and arrivals, to the maximum extent possible and consistent with established safety procedures, use the airspace southeast of the base.
- 2. Traffic patterns are flown to minimize overflights of populated areas.
- 3. Efforts are continually made to schedule missions to keep noise levels at an absolute minimum during evening hours.
- 4. Operational areas for aircraft are over very sparsely populated areas.
- 5. Quiet hours for aircraft operations are normally from 10:30 P.M. to 6:00 A.M. (2230 to 0600) unless a high priority mission or an emergency situation occurs.^{liv}"

In addition, Snowbird Operations has implemented the following flight safety measures:

a. All aircraft carrying live ordnance utilize the southeast corridor

Attocit

- b. Aircraft unable to expend live ordnance due to any system malfunction are diverted to an alternate base to preclude recovery over the Tucson metro area.
- c. Aircraft experiencing malfunctions recover to Davis-Monthan from the southeast, preventing over flight of densely populated areas.

PART IV – Analysis of General United States Air Force (USAF) mishap data from as early as 1975 and a comparison to DMAFB-specific pertinent mishap data.

Department of Defense mishaps (or accidents) are classified into three categories. An aircraft experiences a Class A, B, or C mishap as described below: endo

A. Class A Mishap: Occurs when at least one of the following applies:

1. Total mishap cost is \$1,000,000 or more;

2. A fatality or permanent total disability occurs; and/or

3. An Air Force aircraft is destroyed.

B. Class B Mishap: Occurs when at least one of the following applies:

1. Total mishap cost is \$200,000 or more and less than \$1,000,000; and/or

2. A permanent partial disability occurs and/or 3 or more people are hospitalized;

C. Class C Mishap: Occurs when at least one of the following applies:

1. Cost of reported damage is between \$20,000 and \$200,000;

2. An injury causes a lost workday (i.e., duration of absence is at least 8 hours beyond the day or shift during which mishap occurred); and/or 3 an occupational illness causing absence from work at any time.

Note: in 2009, the Department of Defense changed the mishap categories to the below. The changes did not impact this study.

A. Class A Mishap: Occurs when at least one of the following applies:

1. Total mishap cost is \$2,000,000 or more;

2. A fatality or permanent total disability occurs; and/or

3. An Air Force aircraft is destroyed.

B. Class B Mishap: Occurs when at least one of the following applies:

1. Total mishap cost is \$50,000 or more and less than \$2,000,000; and/or

2. A permanent partial disability occurs and/or 3 or more people are hospitalized;

C. Class C Mishap: Occurs when at least one of the following applies:

1. Cost of reported damage is between \$50,000 and \$500,000;

2. An injury causes a lost workday (i.e., duration of absence is at least 8 hours beyond the day or shift during which mishap occurred); and/or 3 an occupational illness causing absence from work at any time

Analysis

The purpose of this study is to mitigate on-going public concern over Snowbird operations, as expressed in numerous letters written to national leaders by concerned citizens of Tucson, Arizona. The citizens were primarily concerned about their "increased safety risks and noise concerns" related to the Operation Snowbird program. This section will analyze safety risks.

The safety records for Davis-Monthan AFB are excellent. Davis-Monthan AFB permanently assigned units have not experienced a Class A mishap since 2002. The base has experienced three Class A mishaps in the previous 20 years, none of which were within 30 miles of Tucson. Operation Snowbird has been in operation since 1975. In its 35 year history, the unit has never had a Class A mishap; Operation Snowbird's safety record is flawless. While zero mishaps in 35 years is a superior safety record and reflects a strong safety program, it does not guarantee there will not be a mishap in the future. There are, and will continue to be, risks to the citizens of Tucson. Below, in this section, safety risks will be analyzed.

In Table 1 below, safety statistics have been organized so the reader is able to compare general United States Air Force mishap data with DMAFB mishap data. Table 1 contains U.S. Air Force and Davis-Monthan AFB mishaps and mishap rates for the time period 1975 to 2009. Table 2 compares mishap rates for U.S. Air Force aircraft participating in Operation Snowbird. Table 3 displays mishap rates for Royal Air Force aircraft participating in Operation Snowbird. The Air Force did not provide Wyle with safety mishap rates for U.S. Navy, U.S. Marine Corps or U.S. Army aircraft participating in Operation Snowbird. The next part of this section will analyze the historical safety mishap rates in the Tables in an effort to objectively quantify the safety risk to the citizens of Tucson.

To analyze safety risks, Wyle set out to find a method of using historical safety mishap rates and presenting it an objective, tailored and meaningful way to describe "safety risk" at Davis-Monthan AFB. The analysis began with a basic comparison of mishap rates amongst Davis-Monthan AFB permanently assigned aircraft as well as Operation Snowbird aircraft mishap rates. As stated earlier, Class A Mishap rates are the number of Class A mishaps per 100,000 flying hours. The rate is determined by dividing the total number of mishaps in a time period by the total flying hours in the same time period. For example, in 2009, the U.S. Air Force had 17 Class A mishaps and, in 2009, the U.S. Air Force flew a total of 2,125,000 hours.

17 mishaps divided by 2,125,000 hours = 0.000008 mishaps per flying hour

To restate, in 2009, the Air Force suffered 0.000008 mishaps per flying hour. To make the rate meaningful, it is reported per 100,000 flying hours, simply by multiplying the rate by 100,000 to obtain the mishap rate per 100,000 flying hours: The result is:

0.000008 X 100,000 = 0.8 Class A Mishap Rate

The Class A Mishap rates are excellent statistical tools for determining safety performance in the macro sense, e.g., comparing the safety mishaps amongst aircraft in the U.S. Air Force using an equal number of flying hours and a common period of time, e.g., 100,000 flying hours during a one year, five years, ten years or life time period. The Class A mishap tables reveal the F-16's lifetime mishap rate (3.68) is higher than that of the A-10 (2.14). Does this inform us the F-16 has 1.7 times more risk than the A-10 when flying out of Davis-Monthan AFB? It does not. The rate is a calculated ratio of mishaps to hours. Looking at the rate alone cannot inform us whether or not there is more safety risk from the F-16 vice the A-10 flying at Davis-Monthan AFB. The reason is, at Davis-Monthan AFB, the A-10s and F-16s do not fly the same number of hours in a year. As such, the mishap rates (ratios) cannot be used to compare safety risks between two aircraft because the amount of flying hours, or exposure to the general public, is different, unless one factors in actual flying time.

To make the Class A mishap rates relevant for the study's purpose of establishing an objective measure of safety risk at Davis-Monthan AFB, Wyle developed a risk calculus. Wyle's analysis, or risk calculus, begins with the historical Class A mishap rates. Wyle chose to use aircraft lifetime mishap rates.

To keep the units consistent in the calculation, Wyle chose not to use the rate per 100,000 flying hours. Instead, Wyle used the number of mishaps per flying hour. For example, In the Air Force during 2007, the A-10 had one Class A mishap and flew a total of 92,593 hours.

1 mishap divided by 92,593 hours = 0.0000018 mishap per flying hour

Beginning with historical safety rates, the first part of the calculation determines the mishap potential per flying hour. (Note: Wyle acknowledges safety mishap rates are historical statistics. Wyle understands past performance does not guarantee future results. Regardless, lacking knowledge of the future, we have chosen to use past safety performance as a metric for current and future risk.) After determining the mishap potential per flying hour, Wyle then factored in the actual flying hours of an individual aircraft type at a specific location, e.g., A-10s at Davis-Monthan AFB. The purpose is to give proper weight to the mishap potential by factoring in the actual flying time for each aircraft type. For the citizens of Tucson, the actual flying time is the "Exposure Time" to the risk. The risk factor, then, is calculated as follows:

Class A Mishap rate per flying hour multiplied by flying time (exposure time) = Risk Factor

1. Aircraft Class A Mishap Rates per 100,000 hours are found in Tables 1, 2 & 3 $\,$

To calculate Class A Mishap rate per flying hour, divide by 100,000

2. Exposure Time is the number of hours flown by an aircraft type, e.g., A-10s at DMAFB for one year.

To illustrate, the 2007 Davis-Monthan AFB, A-10, Risk Factor is calculated as follows:

- The A-10 has a life time Class A Mishap Rate of 2.14 per 100.000 flying hours
- 2.14 divided by 100,000 = 0.0000214 mishaps per flying hour
- At DMAFB in 2007, the A-10 Flew 11,247 sorties for 19,722.7 hours
- 0.0000214 potential mishaps per hour multiplied by 19,722.7 hours = 0.422 Risk Factor

To further the example, the 2007 Operation Snowbird F-16 Risk Factor is calculated as follows:

- The F-16 has a life time Class A Mishap Rate of 3.68 per 100,000 flying hours
- 3.68 divided by 100,000 = 0.0000368 mishaps per flying hour
- At Operation Snowbird in 2007, the F-16 flew 2,300 sorties for 2,685.9 hours
- 0.0000368 multiplied by 2,685.9 = 0.099 Risk Factor

The above analysis reveals that while the public is exposed to the higher mishap potential of the F-16, the exposure time is far less (the A-10 flew more than seven times as many hours as the F-16). Thus, the resulting safety risk to the public from exposure to the F-16 is lower. When viewed through the lens of the risk factor analysis, one sees the 2007 safety risk of the F-16s (.099 risk factor) operating out of Operation Snowbird is four times less as compared to the A-10s operating out of Davis-Monthan AFB (.422 risk factor). Note: Operation Snowbird's 2007 F-16 sorties included 1,400 sorties and 1,625 hours flown by the 162d Fighter Wing when the wing deployed from Tucson International Airport (TIA) to Davis-Monthan AFB to conduct flying operations while the TIA's runway was under construction.

In contrast to 2007, in 2009, F-16s operating out of Operation Snowbird flew a total of 1,065.2 hours.

The 2009 Operation Snowbird F-16 Risk Factor is:

• 0.0000368 multiplied by 1,065.2 hours = 0.039 Risk Factor

The 2009 355th Wing A-10 Risk Factor is:

0.0000214 multiplied by 18,369.5 hours = 0.393 Risk Factor

In 2009, the A-10 flew 17 times as many hours and the A-10's risk factor was 10 times greater than the F-16.

When one looks at risk in terms of a combination of mishap potential (as defined by historical mishap rates) and actual exposure (as defined by actual flying time), the safety risk amongst aircraft can be fairly and objectively compared. The Risk Factor is a meaningful tool with which one can objectively and fairly compare safety risks amongst different aircraft at Davis-Monthan AFB, or any other location. Wyle believes this tool offers base officials and citizens of Tucson a common vocabulary and fair method (apples-to-apples comparison) for discussing safety risks at Davis-Monthan AFB.

The table below compares cumulative risk factors for all aircraft that operated at Operation Snowbird* with all aircraft operated by the 355th Wing during FY04 – FY09.

Fiscal Year (FY)	Operation Snowbird Cumulative Risk Factor	355 th Wing Cumulative Risk Factor
FY04	0.087	0.523
FY05	0.075	0.737
FY06	0.048	0.656
FY07	0.116	0.538
FY08	0.037	0.578
FY09	0.063	0.556

*Data does not include U.S. Navy, U.S. Army or U.S. Marine Corps aircraft

Operation Snowbird Risk Factors by Aircraft Type:

The F-16 has a potential mishap rate of 0.0000368 mishaps per flight hour. The following are Risk Factor calculations for F-16s operating at Operation Snowbird from 2002 to 2010:

FY 2002 SQN/WING	FROM	то	MDS	SORTIES	HOURS	RISK FACTOR
183FW	5-Jan	19-Jan	10F-16	135	225	
115FW	12-Jan	19-Jan	4XF16	30	50	
114FW	16-Feb	2-Mar	12XF16	185	223.2	
162FW	8-Mar	16-Mar	10-F-16	42	55.7	
144FW	27-Jul	10-Aug	6XF16	64	72	
				456	625.9	0.023

Just domant deesed without USAR common or endorsement

F12003						
SQN/WING	FROM	ТО	MDS	SORTIES	HOURS	RISK FACTOR
162FW	6-Aug	9-Aug	3XF16	6	8.7	1
192 FW	1-Dec	13-Dec	6xF-16	87	113.8	
180FW	5-Jan	18-Jan	12xF-16	205	246.4	
122FW	2-Feb	15-Feb	10xF16	140	168.2	
RTAF	21-Feb	14-Mar	6XF16	68	96.5	$\sim 0 $
132FW	15-Mar	27-Mar	12XF16	104	127	
162FW	2-Jun	13-Jun	12XF16	44	51.9	
AATC	16-Jun	20-Jun	4XF16	12	16	
IAF	25-Jun	1-Aug	10xF-16	400	504	
144FW	12-Jul	26-Jul	6xF-16	80	100.8	
162FW	1-Aug	3-Aug	8XF16	19	27.5	
			•	1165	1460.8	0.054
FY2004						
SON/WING	FROM	то	MDS	SORTIES	HOURS	RISK FACTOR
	11000	10	112.0			
RNLAF	26-Oct	12-Dec	10xF-16	665	864.5]
AATC	17-Nov	19-Nov	4xF-16	16	20.8	
148FW	10-Jan	24-Jan	10xF-16	135	171.9	
114FW	25-Jan	7-Feb	13xF-16	209	260.2	
183FW	8-Feb	21-Feb	12xF-16	146	191.4	
162 FW	4-Aug	8-Aug	5xF16	26	41.2	
	*		X02	1197	1550	0.057
FY 2005		3				
<i>FY 2005</i> SQN/WING	FROM	то	MDS	SORTIES	HOURS	RISK FACTOR
FY 2005 SQN/WING	FROM	<i>TO</i> 22-Jan	MDS	SORTIES	HOURS	RISK FACTOR
FY 2005 SQN/WING 127 FW 148FW	FROM 9-Jan 23-Jan	<i>TO</i> 22-Jan 5-Feb	MDS 10xF-16	SORTIES 168 135	HOURS 203.6 229.6	RISK FACTOR
FY 2005 SQN/WING 127 FW 148FW 180FW	FROM 9-Jan 23-Jan 6-Feb	<i>TO</i> 22-Jan 5-Feb 19-Feb	MDS 10xF-16 10xF-16 11xF-16	SORTIES 168 135 153	HOURS 203.6 229.6 174.7	RISK FACTOR
FY 2005 SQN/WING 127 FW 148FW 180FW 183FW	FROM 9-Jan 23-Jan 6-Feb 20-Feb	TO 22-Jan 5-Feb 19-Feb 5-Mar	MDS 10xF-16 10xF-16 11xF-16 12xF-16	SORTIES 168 135 153 128	HOURS 203.6 229.6 174.7 150.4	RISK FACTOR
FY 2005 SQN/WING 127 FW 148FW 180FW 183FW 158FW	FROM 9-Jan 23-Jan 6-Feb 20-Feb 11-Mar	TO 22-Jan 5-Feb 19-Feb 5-Mar 26-Mar	MDS 10xF-16 10xF-16 11xF-16 12xF-16 12xF-16	SORTIES 168 135 153 128 158	HOURS 203.6 229.6 174.7 150.4 235.4	RISK FACTOR
FY 2005 SQN/WING 127 FW 148FW 180FW 183FW 158FW 182FS	FROM 9-Jan 23-Jan 6-Feb 20-Feb 11-Mar 4-Apr	TO 22-Jan 5-Feb 19-Feb 5-Mar 26-Mar 16-Apr	MDS 10xF-16 10xF-16 11xF-16 12xF-16 12xF-16 12xF-16	SORTIES 168 135 153 128 158 171	HOURS 203.6 229.6 174.7 150.4 235.4 241.1	RISK FACTOR
FY 2005 SQN/WING 127 FW 148FW 180FW 183FW 158FW 182FS	FROM 9-Jan 23-Jan 6-Feb 20-Feb 11-Mar 4-Apr	TO 22-Jan 5-Feb 19-Feb 5-Mar 26-Mar 16-Apr	MDS 10xF-16 10xF-16 11xF-16 12xF-16 12xF-16 12xF-16	SORTIES 168 135 153 128 158 171 913	HOURS 203.6 229.6 174.7 150.4 235.4 241.1 1234.8	RISK FACTOR
FY 2005 SQN/WING 127 FW 148FW 180FW 180FW 183FW 158FW 182FS FY 2006	FROM 9-Jan 23-Jan 6-Feb 20-Feb 11-Mar 4-Apr	TO 22-Jan 5-Feb 19-Feb 5-Mar 26-Mar 16-Apr	MDS 10xF-16 10xF-16 11xF-16 12xF-16 12xF-16 12xF-16	SORTIES 168 135 153 128 158 171 913	HOURS 203.6 229.6 174.7 150.4 235.4 241.1 1234.8	RISK FACTOR
FY 2005 SQN/WING 127 FW 148FW 180FW 183FW 158FW 182FS	FROM 9-Jan 23-Jan 6-Feb 20-Feb 11-Mar 4-Apr	TO 22-Jan 5-Feb 19-Feb 5-Mar 26-Mar 16-Apr	MDS 10xF-16 10xF-16 11xF-16 12xF-16 12xF-16 12xF-16	SORTIES 168 135 153 128 158 171 913	HOURS 203.6 229.6 174.7 150.4 235.4 241.1 1234.8 HOURS	RISK FACTOR
FY 2005 SQN/WING 127 FW 148FW 180FW 183FW 158FW 182FS FY 2006 SQN/WING	FROM 9-Jan 23-Jan 6-Feb 20-Feb 11-Mar 4-Apr FROM	TO 22-Jan 5-Feb 19-Feb 5-Mar 26-Mar 16-Apr	MDS 10xF-16 10xF-16 11xF-16 12xF-16 12xF-16 12xF-16 12xF-16	SORTIES 168 135 153 128 158 171 913 SORTIES 180	HOURS 203.6 229.6 174.7 150.4 235.4 241.1 1234.8 HOURS	RISK FACTOR
FY 2005 SQN/WING 127 FW 148FW 180FW 183FW 158FW 182FS FY 2006 SQN/WING 178 FW 180 FW	FROM 9-Jan 23-Jan 6-Feb 20-Feb 11-Mar 4-Apr FROM 21-Oct 8-Jap	TO 22-Jan 5-Feb 19-Feb 5-Mar 26-Mar 16-Apr	MDS 10xF-16 10xF-16 11xF-16 12xF-16 12xF-16 12xF-16 12xF-16 12xF-16 11xF-16	SORTIES 168 135 153 128 158 158 171 913 SORTIES 180 114	HOURS 203.6 229.6 174.7 150.4 235.4 241.1 1234.8 HOURS 220.1 124.5	RISK FACTOR
FY 2005 SQN/WING 127 FW 148FW 180FW 183FW 158FW 182FS FY 2006 SQN/WING 178 FW 180 FW 181 FW	FROM 9-Jan 23-Jan 6-Feb 20-Feb 11-Mar 4-Apr FROM 21-Oct 8-Jan	TO 22-Jan 5-Feb 19-Feb 5-Mar 26-Mar 16-Apr TO 5-Nov 21-Jan 4-Mar	MDS 10xF-16 10xF-16 11xF-16 12xF-16 12xF-16 12xF-16 12xF-16 12xF-16 12xF-16 12xF-16 12xF-16	SORTIES 168 135 153 128 158 171 913 SORTIES 180 114 155	HOURS 203.6 229.6 174.7 150.4 235.4 241.1 1234.8 HOURS 220.1 134.5 102.2	RISK FACTOR
FY 2005 SQN/WING 127 FW 148FW 180FW 183FW 158FW 158FW 182FS FY 2006 SQN/WING 178 FW 180 FW 181 FW 115 FW	FROM 9-Jan 23-Jan 6-Feb 20-Feb 11-Mar 4-Apr FROM 21-Oct 8-Jan 19-Feb	TO 22-Jan 5-Feb 19-Feb 5-Mar 26-Mar 16-Apr TO 5-Nov 21-Jan 4-Mar 17 Mor	MDS 10xF-16 10xF-16 11xF-16 12xF-16 12xF-16 12xF-16 12xF-16 12xF-16 11xF-16 12xF-16 12xF-16	SORTIES 168 135 153 128 158 171 913 SORTIES 180 114 155 120	HOURS 203.6 229.6 174.7 150.4 235.4 241.1 1234.8 HOURS 220.1 134.5 192.2 176.4	RISK FACTOR
FY 2005 SQN/WING 127 FW 148FW 180FW 183FW 158FW 182FS FY 2006 SQN/WING 178 FW 180 FW 181 FW 115 FW 140 FW	FROM 9-Jan 23-Jan 6-Feb 20-Feb 11-Mar 4-Apr FROM 21-Oct 8-Jan 19-Feb 5-Mar	TO 22-Jan 5-Feb 19-Feb 5-Mar 26-Mar 16-Apr TO 5-Nov 21-Jan 4-Mar 17-Mar 28 App	MDS 10xF-16 10xF-16 11xF-16 12xF-16 12xF-16 12xF-16 12xF-16 11xF-16 12xF-16 12xF-16 12xF-16 12xF-16 12xF-16	SORTIES 168 135 153 128 158 158 171 913 SORTIES 180 114 155 120 102	HOURS 203.6 229.6 174.7 150.4 235.4 241.1 1234.8 HOURS 220.1 134.5 192.2 176.4 154.2	RISK FACTOR
FY 2005 SQN/WING 127 FW 148FW 180FW 183FW 158FW 182FS FY 2006 SQN/WING 178 FW 180 FW 181 FW 115 FW 149 FW	FROM 9-Jan 23-Jan 6-Feb 20-Feb 11-Mar 4-Apr 5-ROM 21-Oct 8-Jan 19-Feb 5-Mar 15-Apr	TO 22-Jan 5-Feb 19-Feb 5-Mar 26-Mar 16-Apr 5-Nov 21-Jan 4-Mar 17-Mar 28-Apr	MDS 10xF-16 10xF-16 11xF-16 12xF-16 12xF-16 12xF-16 12xF-16 11xF-16 12xF-16 12xF-16 12xF-16 12xF-16	SORTIES 168 135 153 128 158 158 171 913 SORTIES 180 114 155 120 122	HOURS 203.6 229.6 174.7 150.4 235.4 241.1 1234.8 HOURS 220.1 134.5 192.2 176.4 154.3	RISK FACTOR

Preliminary Study Report $\blacksquare 40$

-

	IROM	10	MDS	SORTIES	HOUKS	KISK FACIUK
162FW	15-Sep	15-Oct	F-16	1400	1625]
178FW	5-Nov	18-Nov	F-16	142	184.6	
180FW	3-Dec	15-Dec	F-16	160	242.5	
181 FW	7-Jan	20-Jan	F-16	136	170.5	
158FW	19-Jan	4-Feb	F-16	152	182.1	1
183 FW	5-Feb	16-Feb	F-16	90	137.4	
149FW	15-Apr	28-Apr	F-16	156	239.4	
162FW	5-Jun	8-Jun	F-16	12	15.2	
162 AATC	21-Aug	31-Aug	F-16	52	73.8	
162FW	4-Sep	1-Oct	F-16	0	0	
		<u>.</u>		2300	2685.9	0.099
Y2008					0	
SQN/WING	FROM	ТО	MDS	SORTIES	HOURS	RISK FACTOR
162	21-Oct	3-Nov	F-16]
115FW	4-Nov	17-Nov	F-16	114	161.1	
120FW	1-Dec	15-Dec	F-16	120	185.5	
149FW	13-Apr	25-Apr	F-16	144	227.4	•
• 2			X	378	574	0.021
FY 2009						
QN/WING	FROM	то	MDS	SORTIES	HOURS	RISK FACTOR
Belgium AF	23-Oct	21-Nov	F-16	252	426.5]
Belgium AF 27FW	23-Oct 3-Jan	21-Nov 10-Jan	F-16 F-16	252 26	426.5 38.3	
8elgium AF 27FW 78 FW	23-Oct 3-Jan 10-Jan	21-Nov 10-Jan 31-Jan	F-16 F-16 F-16	252 26 331	426.5 38.3 362.9	
Belgium AF 27FW 78 FW 49FW	23-Oct 3-Jan 10-Jan 12-Apr	21-Nov 10-Jan 31-Jan 1-May	F-16 F-16 F-16 F-16	252 26 331 157	426.5 38.3 362.9 237.5	
Belgium AF 27FW 78 FW 49FW	23-Oct 3-Jan 10-Jan 12-Apr	21-Nov 10-Jan 31-Jan 1-May	F-16 F-16 F-16 F-16	252 26 331 157 7 66	426.5 38.3 362.9 237.5 1065.2	0.039
Belgium AF 27FW 78 FW 49FW	23-Oct 3-Jan 10-Jan 12-Apr	21-Nov 10-Jan 31-Jan 1-May	F-16 F-16 F-16 F-16	252 26 331 157 7 66	426.5 38.3 362.9 237.5 1065.2	0.039
Belgium AF 127FW 178 FW 149FW FY 2010 SQN/WING	23-Oct 3-Jan 10-Jan 12-Apr FROM	21-Nov 10-Jan 31-Jan 1-May	F-16 F-16 F-16 F-16 MDS	252 26 331 157 766 SORTIES	426.5 38.3 362.9 237.5 1065.2 HOURS	0.039 RISK FACTOR
Belgium AF 127FW 178 FW 149FW FY 2010 SQN/WING 121th FS (D.C)	23-Oct 3-Jan 10-Jan 12-Apr FROM	21-Nov 10-Jan 31-Jan 1-May TO 31-Oct	F-16 F-16 F-16 F-16 MDS (10) F-16	252 26 331 157 766 SORTIES	426.5 38.3 362.9 237.5 1065.2 HOURS	0.039 RISK FACTOR
Belgium AF 127FW 178 FW 149FW FY 2010 SQN/WING 121th FS (D.C) 119th FS (NJ.)	23-Oct 3-Jan 10-Jan 12-Apr FROM 15-Oct 4-Jan	21-Nov 10-Jan 31-Jan 1-May TO 31-Oct 15-Jan	F-16 F-16 F-16 F-16 MDS (10) F-16 (10) F-16	252 26 331 157 766 SORTIES 119 110	426.5 38.3 362.9 237.5 1065.2 HOURS 447.3 202.9	0.039 RISK FACTOR
Belgium AF 27FW 78 FW 49FW FY 2010 SQN/WING 21th FS (D.C) 19th FS (NJ.) 34th FS (VT.)	23-Oct 3-Jan 10-Jan 12-Apr FROM 15-Oct 4-Jan 9-Jan	21-Nov 10-Jan 31-Jan 1-May TO 31-Oct 15-Jan 23-Jan	F-16 F-16 F-16 F-16 MDS (10) F-16 (10) F-16 (11) F-16	252 26 331 157 766 SORTIES 119 110 135	426.5 38.3 362.9 237.5 1065.2 HOURS 447.3 202.9 225.6	0.039 RISK FACTOR
Belgium AF 27FW 78 FW 49FW 77 2010 9QN/WING 21th FS (D.C) 19th FS (D.C) 19th FS (NJ.) 34th FS (VT.) 12th FS (OH.)	23-Oct 3-Jan 10-Jan 12-Apr FROM 15-Oct 4-Jan 9-Jan 24-Jan	21-Nov 10-Jan 31-Jan 1-May TO 31-Oct 15-Jan 23-Jan 6-Feb	F-16 F-16 F-16 F-16 MDS (10) F-16 (10) F-16 (10) F-16 (10) F-16	252 26 331 157 766 SORTIES 119 110 135 144	426.5 38.3 362.9 237.5 1065.2 HOURS 447.3 202.9 225.6 196.1	0.039 RISK FACTOR

The A-10 has a potential mishap rate of 0.0000214 mishaps per flight hour. The following are Risk Factor calculations for A-10s operating at Operation Snowbird from 2002 to 2010:

FY 2002

50

SQN/WING	FROM	ТО	MDS	SORTIES	HOURS	RISK FACTOR

Preliminary Study Report lacksquare 41

104FW	19-Jan-02	2-Feb-02	A-10	138	262.4	
110FW	2-Feb-02	16-Feb-02	A-10	146	251.8	
124WG	16-Mar-02	30-Mar-02	A-10	138	248.8	
175WG	21-Jul-02	26-Jul-02	A-10	17	12	
1/5//0	2100102	20 8 41 62			90 -	0.015
				439	805	0.017
FY 2003						
SQN/WING	FROM	ТО	MDS	SORTIES	HOURS	RISK FACTOR
		r 	n 	1	r	
AATC	29-Apr-03	23-May-03	A-10	18	48.4	
				18	48.4 X	0.001
FY 2004						
SON/WING	FROM	то	MDS	SORTIES	HOURS	RISK FACTOR
	IROWI	10	MDS	SORTILS	noeks	MONTHOION
110FW	7-Mar-04	20-Mar-04	A-10	75	124.3]
175WG	13-Jun-04	27-Jun-04	A-10	19	34.1	
/0			Ļ -	01	158 4	0.002
			1	94	150.4	0.003
FY 2006			ŝ			
SQN/WING	FROM	ТО	MDS	SORTIES	HOURS	RISK FACTOR
	-	r _		1	Í	1
111 FW	2-Oct-05	15-Oct-05	A-10	127	211	
175 FW	6-Nov-05	19-Nov-05	A-10	145	246.8	
110 FW	28-Jan-06	18-Feb-06	A-10	193	294.7	
				465	752.5	0.016
FY 2007						
,		0				
SQN/WING	FROM	ТО	MDS	SORTIES	HOURS	RISK FACTOR
			i	i	í	1
303 FS	18-Feb	2-Mar	A-10	166	305.3	
172FW	3-Mar	15-Mar	A-10	121	181.5	
	XY			28 7	486.8	0.010
FY 2009 🧹						
SON/WING	FROM	ТО	MDS	SORTIES	HOURS	RISK FACTOR
		_ •				
104TH	11-Jun	7-Jul	A-10	121	229.3	
188FW	25-Jul	7-Aug	A-10	131	214.6	
<u> </u>		/ / / / / /		050	449.0	0.010
				452	443.9	0.010

The F-15 has a potential mishap rate of 0.0000242 mishaps per flight hour. The following are Risk Factor calculations for F-15s operating at Operation Snowbird from 2002 to 2010:

FY 2002

Preliminary Study Report \blacksquare 42

SQN/WING	FROM	ТО	MDS	SORTIES	HOURS	RISK FACTOR
						1
8FW	11-Jul-02	30-Aug-02	F-15C	360	424.3	
				360	424.3	0.010
FY 2003						
SQN/WING	FROM	ТО	MDS	SORTIES	HOURS	RISK FACTOR
	1					
AATC	29-Apr-03	23-May-03	F-15	32	86.3	20°
154WG	28-Jun-03	13-Jul-03	F-15	80	100.8	
				112	187.1	0.005
FY 2008						Ś
SQN/WING	FROM	ТО	MDS	SORTIES	HOURS	RISK FACTOR
131FW	31-Mar	11-Apr	F-15	111	136.4	r
				111	136.4	0.003

The H-60 has a potential mishap rate of 0.0000414 mishaps per flight hour. The following are Risk Factor calculations for H-60s operating at Operation Snowbird from 2002 to 2010:

<i>FY 2002</i> SQN/WING	FROM TO		MDS	SORTIES	HOURS	RISK FACTOR	
129 RQW	17-Mar-02	22-Mar-02	HH-60	4	12.8		
				4	12.8	0.001	
FY 2007		~					
SON/WING	FROM	то	MDS	SORTIES	HOURS	RISK FACTOR	
C <i>i</i>		A.	-				
Ang Thndr	7-Jun	20-Jun	HH-60	25	70.0	0.003	
<i>FY 2008</i> SQN/WING	FROM	то	MDS	SORTIES	HOURS	RISK FACTOR	
101RQS	15-Jun	25-Jun	HH-60	30	84.0	0.003	
<i>FY 2009</i> SQN/WING	FROM	то	MDS	SORTIES	HOURS	RISK FACTOR	
Ang Thndr	1-Dec	12-Dec	HH-60	40	44.8		
				40	44.8	0.002	

The Tornado (GR-4) has a potential mishap rate of 0.0000221 mishaps per flight hour. The following are Risk Factor calculations for GR-4s operating at Operation Snowbird from 2002 to 2010.

FY2002

SQN/WING	FROM	ТО	MDS	SORTIES	HOURS	RISK FACTOR
						- 4

	105 7	1 78		1-Apr-02	1 26-Mar-02	61780
	126.2	102	GR4	22-Apr-02	4-Apr-02	14SO
	186	140	GR4	5-Oct-02	9-Sep-02	31SO
0.00	417.9	320	•			0
RISK FACTOR	HOURS	SORTIES	MDS	ТО	FROM	<i>FY2 2003</i> SQN/WING
	167.6	137	GR4	30-Oct-02	5-Oct-02	2/9SQ
	427.4	340	GR4	31-Oct-03	13-Sep-03	6/2/9SQ
0.01	595	477				
RISK FACTOR	HOURS	SORTIES	MDS	ТО	FROM	<i>FY 2004</i> SQN/WING
	374.7	285	GR4	22-May-04	17-Apr-04	12/14/15/617 SQ
	136.6	110	GR7	12-Jul-04	24-Jun-04	1 SQ
	281.4	207	GR4	1-Oct-04	1-Sep-04	RAF
0.(792.7	602	MDS	ТО	FROM	<i>FY 2005</i> SQN/WING
RISK FACTOR	HOURS	SURIILS				
RISK FACTOR	HOURS 325.9	233	GR4	30-Sep-05	27-Aug-05	RAF
RISK FACTOR	HOURS 325.9 325.9	233 233	GR4	30-Sep-05	27-Aug-05	RAF
RISK FACTOR	325.9 325.9 325.9 HOURS	233 233 SORTIES	GR4 MDS	30-Sep-05	27-Aug-05	RAF <i>FY 2007</i> SQN/WING
RISK FACTOR	325.9 325.9 325.9 HOURS 158.5	233 233 SORTIES	GR4 MDS GR4	30-Sep-05 TO 20-Aug	27-Aug-05 FROM 25-Jul	RAF FY 2007 SQN/WING 14/12 SQDN's
RISK FACTOR 0.00 RISK FACTOR 0.00	HOURS <u>325.9</u> 325.9 HOURS <u>158.5</u> 158.5	233 233 SORTIES	GR4 MDS GR4	30-Sep-05 TO 20-Aug	27-Aug-05 FROM 25-Jul	RAF FY 2007 SQN/WING 14/12 SQDN's
RISK FACTOR	HOURS 325.9 325.9 HOURS 158.5 158.5 HOURS	233 233 233 SORTIES 123 123 SORTIES	GR4 MDS GR4 MDS	30-Sep-05 TO 20-Aug TO	27-Aug-05 FROM 25-Jul FROM	RAF FY 2007 SQN/WING 14/12 SQDN's FY 2009 SQN/WING
RISK FACTOR	HOURS 325.9 325.9 HOURS 158.5 158.5 HOURS 240.3	233 233 233 SORTIES 123 123 SORTIES 173	GR4 MDS GR4 MDS GR4	30-Sep-05 TO 20-Aug TO 30-May	27-Aug-05 FROM 25-Jul FROM 26-Apr	RAF FY 2007 SQN/WING 14/12 SQDN's FY 2009 SQN/WING RAF

Preliminary Study Report 🔳 44

FY2010		_					
SQN/WING	FROM	ΤΟ		MDS	SORTIES	HOURS	RISK FACTOR
2 Sqn.	02/06	6/10	02/20/10	GR-4	61	97.2]
14 Sqn.	02/21	l/10	03/09/10	GR-4	71	107.2	
					132	204.4	0.005
The Harrie ollowing are Ri	r (GR-7) h sk Factor c	nas a pote alculation	ential mis s for GR-7	hap rate of s operating a	0.0000646 It Operation S	mishaps p Snowbird fro	er flight hour. The om 2002 to 2010.
Y 2004							
SQN/WING	FROM	ТО	MDS	SORTIES	6 HOURS	RISK F	ACTOR
1 SQN	22-Oct	7-Nov	GR7	91	146.1		
			*	91	146.1		0.009
FY 2005						-	
SQN/WING	FROM	ТО	MDS	SORTIES	6 HOURS	RISK F.	ACTOR
3, 1, 4 SQN	11-Jul	5-Aug	GR7	274	352.9		
				274	352.9		0.023
FY 2008				AC.	D ^V		
SQN/WING	FROM	ТО	MDS	SORTIES	5 HOURS	RISK F	ACTOR
4SQN	8-Sep	29-Sep	GR7/9	122	158.6		
FY 2009			÷,	122	158.6		0.010
SQN/WING	FROM	то	MDS	SORTIES	6 HOURS	RISK F	ACTOR
RAF	16-Feb	2-Mar	GR-7	67	87.1		
RAF 9 SQN	6-Jun	7-Jul	GR-7	17	20.4		1
		,		84	107.5		0.007
355 th Wing	g Risk Fa	ctors by .	Aircraft T	уре:			
The A-10 h actor calculation	as a poten ons for A-10	itial misha os operati	ap rate of ng in the 3	0.0000214 55 th WG from	mishaps flig n 2004 to 20	ht hour. T 09:	he following are Risk
FY 2004 SON/WING	FROM	то	ז	MDS SO	RTIES H	TIBS DI	ISK FACTOR

	SQN/WING	FROM	10	MD5	SURIIES	HUUKS	KISK FACTUR
ev (355 th WG	FY04	FY04	A-10	9,328	18,472.7	
~ 2 h					9,328	18,472.7	0.395
$\mathcal{O}_{\mathcal{F}_2}$	<i>FY 2005</i> SQN/WING	FROM	то	MDS	SORTIES	HOURS	RISK FACTOR

Preliminary Study Report $\blacksquare 45$

						_
$355^{ ext{th}} ext{WG}$	FY05	FY05	A-10	14,183	27,672.8	
				14,183	27,672.8	0.592
FY 2006						
SQN/WING	FROM	ТО	MDS	SORTIES	HOURS	RISK FACTOR
					(0	, 20'
355 ^m WG	FY06	FY06	A-10	12,607	24,635.8	
				12,607	24,635.8	0.527
FV 2007						× 0 ³
SQN/WING	FROM	ТО	MDS	SORTIES	HOURS	RISK FACTOR
				1		2, Y
$355^{\text{th}} \text{WG}$	FY07	FY07	A-10	11,247	19,722.7	
				11,247	19,722.7	0.422
				~ (N	
FY 2008						
SQN/WING	FROM	ТО	MDS	SORTIES	HOURS	RISK FACTOR
	TW-0	TW-0				
355 th WG	FY08	FY08	A-10	11,341	22,271.1	
		~		11,341	22,271.1	0.477
		•X				
FY 2009						
SQN/WING	FROM	то	MDS	SORTIES	HOURS	RISK FACTOR
255th WG	FV00	FV00	A-10	0.650	18 260 5]
<u> </u>	1109	1109	110	9,039	19 060 -	0.000
				9,059	18,309.5	0.393
	XY					
Ó						
The H-60 h	as a potential	mishap rate o	f 0.00004	14 mishaps p	er flight hou	r. The following are Ri
factor calculation	ons for H-60s	operating in th	ne 355 th W0	G from 2004 t	0 2009:	
FY 2004						

	FY 2004 SQN/WING	FROM	то	MDS	SORTIES	HOURS	RISK FACTOR
X	55 RQS	FY04	FY04	HH-60	Unknown	2,740.0	
Olyr					Unknown	2,740.0	0.113
Y	FY 2005	FROM	то	MDS	SORTIES	HOURS	RISK FACTOR

Preliminary Study Report 🔳 46

SQN/WING

55 RQS	FY05	FY05	HH-60	Unknown	3,099.9	
				Unknown	3,099.9	0.128
FV 2006						Clr
SQN/WING	FROM	ТО	MDS	SORTIES	HOURS	RISK FACTOR
	1	1	1	1	1	20°
55 RQS	FY06	FY06	HH-60	Unknown	2,711.0	<u> </u>
				Unknown	2,711.0	0.112
FY 2007						×
SQN/WING	FROM	ТО	MDS	SORTIES	HOURS	RISK FACTOR
D OC	177/0-			TT.1		
55 KQS	FY07	FY07	HH-60		1,708.9	
				Unknown	1,708.9	0.071
				~ C		
FY 2008		TO		CODETEC	HOUDO	
SQN/WING	FROM	TO	MDS	SORTIES	HOURS	RISK FACTOR
55 ROS	FY08	FY08	HH-60	Unknown	1.394.2]
00			X	Unknown	1 201 2	0.058
			- N	CIRIOWI	1,394.2	0.030
FY 2009 SON/WING	FROM	то	MDS	SORTIES	HOURS	RISK FACTOR
SQN/ WING	ГКОМ		MDS	SURIES	HOURS	MSRIACION
55 RQS	FY09	FY09	HH-60	Unknown	1,425.8	
		0		Unknown	1,425.8	0.059
	. 2	P			/ •	
The C 100 l	has a potential	michan rate e	faaaaa	8- michana n	n flight hav	The following are Pick
Factor calculati	ons for HC-13	Ps operating i	in the 355^{th}	¹ WG from 200	or ingit 1100 07 to 2009:	1. The following are Kisk
		· · · · · · · · · · · · · · · · · · ·		• •	,	

	<i>FY 2004</i> SQN/WING	FROM	то	MDS	SORTIES	HOURS	RISK FACTOR
	79 RQS	FY04	FY04	HC-130P	Unknown	1,731.8	
	S				Unknown	1,731.8	0.015
Draft							

<i>FY 2005</i> SQN/WING	FROM	то	MDS	SORTIES	HOURS	RISK FACTOR
[(1	1	_	1	
79 RQS	FY05	FY05	HC-130P	Unknown	1,969.7	Ch.
				Unknown	1,969.7	0.017
						TSC+
FV 2006						20,
SQN/WING	FROM	то	MDS	SORTIES	HOURS	RISK FACTOR
79 RQS	FY06	FY06	HC-130P	Unknown	1,942.1	
	t.			Unknown	1,942.1	0.017
EV 2007						
SQN/WING	FROM	ТО	MDS	SORTIES	HOURS	RISK FACTOR
			1			-
79 RQS	FY07	FY07	HC-130P	Unknown	1,768.0	
				Unknown	1,768.0	0.015
			. (
FY 2008				7		
SQN/WING	FROM	ТО	MDS	SORTIES	HOURS	RISK FACTOR
[[1		-	T	1
79 RQS	FY08	FY08	HC-130P	Unknown	1,552.0	
		•.X		Unknown	1,552.0	0.013
		A.				
FY 2009						
SQN/WING	FROM	ТО	MDS	SORTIES	HOURS	RISK FACTOR
D 0 0			TTO D			1
79 RQS	FY09	FY09	HC-130P	Unknown	1,591.9	1
	~C)			Unknown	1,591.9	0.014
The C-130 l	nas a potential	mishap rate o	f 0.000085	mishaps per	flight hour.	The following are Risk
Factor calculation	ons for EC-130	s operating in	the 355 th WC	trom 2007 to :	0 2009:	
FY 2007						
SQN/WING	FROM	ТО	MDS	SORTIES	HOURS	RISK FACTOR

	<i>FY 2007</i> SQN/WING	FROM	ТО	MDS	SORTIES	HOURS	RISK FACTOR
A	355 th WG	FY07	FY07	EC-130	654	3,504.2	
Draft					654	3,504.2	0.030

<i>FY 2008</i> SQN/WING	FROM	ТО	MDS	SORTIES	HOURS	RISK FACTOR
355 th WG	FY08	FY08	EC-130	1808	10,460.1	
				1808	10,460.1	0.089
FY 2009 SQN/WING	FROM	ТО	MDS	SORTIES	HOURS	RISK FACTOR
355 th WG	FY09	FY09	EC-130	1,887	10,556.2	
				1,887	10,556.2	0.090
	Table 1 - U	SAF mishap dat	ta and DMAFE	3 mishap data,	1975 - 2009	ator

Table 1 - USAF	mishap data and DMAF	⁻ B mishap data,	1975 - 2009

		SAI IIISIIup dutu t		Shap data, 177	5 2007	
Year	Total Class A	Annual Mishap	Total Class A	Annual Class A	Annual Class A	Annual Class A
	Mishaps - Air	Rate - Air Force	Mishaps -	Mishap Rate - 👝	Mishap Rate -	Mishap Rate -
	Force		DMAFB	A-10	C-130	H-60
1975	93	2.77	4	0.00	0.82	N/A
1976	87	2.81	1	0.00	0.00	N/A
1977	88	2.78	1	11.96	0.30	N/A
1978	98	3.15	1	15.72	2.01	N/A
1979	94	2.94	4	9.24	0.00	N/A
1980	81	2.56	1	3.84	0.56	N/A
1981	80	2.44	1	2.86	1.09	N/A
1982	78	2.33	0	1.82	0.53	0.00
1983	59	1.73	0	3.10	0.27	0.00
1984	62	1.77	1	2.68	0.80	0.00
1985	53	1.49	0	1.78	0.79	0.00
1986	62	1.79	0	1.37	0.54	0.00
1987	40	1.51	0	2.92	0.36	44.42
1988	55	1.64	1	1.37	0.58	0.00
1989	56	1.59	1	3.03	0.29	0.00
1990	51	1.49	0	1.35	0.00	0.00
1991	41	1.11	0	0.88	0.00	6.85
1992	48	1.69	0	1.79	0.63	5.15
1993	34	1.35	0	1.74	0.33	4.37
1994	35	1.55	0	3.35	0.36	8.26
1995	34	1.53	0	1.69	0.35	3.75
1996	27	1.24	0	1.63	0.34	0.00
1997	30	1.42	1	2.40	0.70	0.00
1998	24	1.14	1	0.81	0.00	3.84
1999	34	1.60	0	1.63	0.00	0.00
2000	23	1.13	0	1.80	0.37	3.90
2001	24	1.16	0	1.78	0.73	0.00
2002	35	1.47	1	1.74	0.94	11.73
2003	31	1.29	0	0.81	0.00	4.20
2004	27	1.18	0	2.53	0.31	0.00
2005	32	1.49	0	0.00	0.66	18.29
2006	19	0.90	0	0.00	0.00	0.00
2007	27	1.32	0	0.00	0.00	0.00
2008	26	1.32	0	1.00	0.39	7.87
2009	17	0.80	0	1.08	0.00	4.03
Life Time				2.14	0.85	4.14

 Life Time
 2.14

 Note: Class A Mishap Rate = number of Class A mishaps per 100,000 flying hours

Oral

	Annual Class A	Annual Class	Annual Class	Annual Class	Annual Class	Annual Class	Annual Class
	Mishap Rate -	A Mishap	A Mishap	A Mishap	A Mishap	A Mishap	A Mishap
	Air Force	Rate - F-100	Rate - 0-2	Rate - A-7	Rate - F-15	Rate - F-16	Rate - A-10
1975	2.77	6.88	1.41	13.41	22.02	621.12	0.00
1976	2.81	3.78	1.36	7.05	0.00	442.48	0.00
1977	2.78	7.94	2.79	6.44	14.16	0.00	11.96
1978	3.15	10.51	3.88	8.92	11.59	0.00	15.72
1979	2.94	14.87	0.00	8.66	5.16	30.64	9.24
1980	2.56	0.00	3.32	3.28	4.57	18.65	3.84
1981	2.44	0.00	5.83	4.95	3.78	8.86	2.86
1982	2.33	0.00	2.62	2.37	1.96	15.83	1.82
1983	1.73	0.00	0.00	2.38	2.36	7.30	3.10
1984	1.77	0.00	3.71	7.01	1.71	5.01	2.68
1985	1.49	1724.1	7.48	5.99	2.70	4.55	1.78
1986	1.79	0.00	0.00	1.22	3.53	4.32	1.37
1987	1.51	0.00	0.00	1.56	1.94	3.43	2.92
1988	1.64	0.00	0.00	6.04	0.50	6.80	1.37
1989	1.59	0.00	N/A	3.93	2.33	3.63	3.03
1990	1.49	0.00	N/A	1.40	3.08	3.19	1.35
1991	1.11	N/A	N/A	1.47	1.09	4.55	0.88
1992	1.69	N/A	N/A	9.72	2.26	4.04	1.79
1993	1.35	N/A	N/A	0.00	1.38	4.38	1.74
1994	1.55	N/A	N/A	N/A	1.90	4.00	3.35
1995	1.53	N/A	N/A	N/A	1.94	2.59	1.69
1996	1.24	N/A	N/A	N/A	2.49	2.40	1.63
1997	1.42	N/A	N/A	N/A	1.56	3.00	2.40
1998	1.14	N/A	N/A	N/A	1.59	3.89	0.81
1999	1.60	N/A	N/A	N/A	4.23	5.11	1.63
2000	1.13	N/A	N/A	N/A	2.23	2.62	1.80
2001	1.16	N/A	N/A	N/A	1.09	3.85	1.78
2002	1.47	N/A	N/A	N/A	2.57	1.90	1.74
2003	1.29	N/A	N/A	N/A	2.07	3.09	0.81
2004	1.18	N/A	N/A	N/A	1.58	0.58	2.53
2005	1.49	N/A	N/A	N/A	1.77	1.54	0.00
2006	0.90	N/A	N/A	N/A	0.59	2.74	0.00
2007	1.32	N/A	N/A	N/A	3.76	3.29	0.00
2008	1.32	N/A	N/A	N/A	2.78	1.05	1.00
2009	0.80	N/A	N/A	N/A	1.39	1.17	1.08
Life Time	9.42	21.22	2.82	5.71	2.42	3.68	2.14
Last 10 Years	~K	· · · · · · · · · · · · · · · · · · ·			1.97	2.22	1.08
Last 5 Years	XY				2.04	2.00	0.38

Table 2 - USAF Aircraft Participating in OSB, Mishap Rates, 1975 - 2009

Note: Class A Mishap Rate = number of Class A mishaps per 100,000 flying hours

	Tornado	Typhoon	Harrier
Total Fg Hrs	180700	36500	61900
Total Cat 1 Occurrances	429	60	121
Rate of Cat 1 Occurances per 10000 Fg Hrs	23.74	16.44	19.55
Total Cat 2 Occurances	19	4	10
Rate of Cat 2 Occurances per 10000 Fg Hrs	1.05	1.10	1.62
Total Cat 3 Occurances	6	0	5
Rate of Cat 3 Occurances per 10000 Fg Hrs	0.33	0.00	0.81
Total Cat 4 Occurances	0	1	0
Rate of Cat 4 Occurances per 10000 Fg Hrs	0.00	0.27	0.00
Total Cat 5 Occurances	4	0	4
Rate of Cat 5 Occurances per 10000 Fg Hrs	0.22	0.00	0.65

Table 3 - RAF Aircraft Participating in OSB, Mishap Rates

The above table is for Royal Air Force aircraft; it uses the mishap rate per 10,000 flying hours.

Repair Category	Definition
1	The aircraft is repairable within the aircraft custodian's capabilities.
2	The aircraft is repairable within the aircraft custodian's Forward maintenance organization capabilities, or the maintenance capabilities of any Forward organization to which it may be allotted.
3	The aircraft is repairable on site but the work is considered by the aircraft custodian to be beyond their Forward maintenance organization capability and must be repaired by a Depth maintenance organization or other Repair Organization on site.
4	The aircraft is repairable but it is considered to need special facilities or equipment not available on site. The repair will be carried out by an RO at an MOD facility or contractor's works.
5	The aircraft is considered beyond economic repair or has been totally destroyed.

For the purposes of this report, Cat 5 Occurrences were considered Class A Mishaps. When adjusted to 100,000 flight hours, the Class A rates for RAF aircraft are as follows:

Tornado = 2.21;

- Typhoon = 0.00; and
- Harrier = 6.46.

PART V – Based on available data, recommendations to mitigate perceived quality of life concerns of excessive noise from operations and safety concerns related to perceptions that pilots who temporarily train at DMAFB are properly following specific safety precautions.

SUMMARY

Part I of this report revealed the mission, the number of operations, and the types of aircraft in Operation Snowbird have changed substantially since development of the EA in 1978. It was also demonstrated the training has evolved from winter deployment training for the Cold War era to year-round pre-deployment training exercises for Operations IRAQI FREEDOM and ENDURING FREEDOM. Other significant changes include: none of the original aircraft in the EA are currently involved in OSB; the number of days OSB aircraft are projected to be at DM has risen from two weeks to one month or longer; the number of operations has, in some years, doubled; night time operations have been added; the limitation of flight operations to one arrival and departure with no pattern operations conducted has been inconsistently accomplished or documented since 1978; and on-base aircraft maintenance run-up operations have likewise been accomplished and documented. In short, there have been significant changes in the OSB's mission, training and aircraft operations since the 1978 EA was released.

Part II reported of all known Operational Snowbird operations data from 1975 to the present. From a noise perspective, there are two areas for discussion. The first is data availability/consistency and the second is the resulting OSB aircraft noise compared to noise resulting from all aircraft operations at DMAFB.

As shown in the noise data spread sheet, there has been little to no consistency in collecting operations data each year (i.e., complete data gaps for 1978, 1979, 1980, 1981, 1983, 1984, 1985, 1986, 1987 1988, 1989, 1992, 1993, 1996, 1997, and 1999). What operations data is recorded (e.g., some years only have total sorties by all aircraft whereas other years have sorties by aircraft), or what metrics were used to record the data from 1977 to 2000, it has only been since 2000 that operations data has been available each year to the present time.

The second discussion area is the evidence collected shows a reasonable doubling of OSB operations from 1978 to 2004 and then a slight reduction in 2009 from 2004 conditions. From a noise perspective, this approximate doubling of operations would probably be indistinguishable to the average individual in the context of overall DMAFB operations. Using engineering judgment, it is our opinion that should a noise analysis be accomplished using the Department of Defense approved NOISEMAP program, it is doubtful that the noise contours would increase by more than one dB, if even that, and that such a small difference in noise of all operations versus OSB operations would again be indistinguishable.

Part III reviewed safety precautions at Operations Snowbird. The study found no evidence affirming the perception that pilots who fly in Operation Snowbird do not follow safety procedures. The study did find Operations Snowbird has an exceptional flight safety record, zero Class A mishaps in 35 years of operations. The study concluded the perception that pilots who temporarily train at DMAFB are not properly following specific safety precautions is a misperception. Regardless, as the 1992 AICUZ stated,

"...despite the best training and maintenance, history makes it clear that accidents unfortunately do occur.^{ly}" Because there remains a potential for future mishaps, the study recognizes the importance of identifying and mitigating risks.

Part IV was an analysis of flight safety mishap data for Operations Snowbird and Davis-Monthan AFB. In addition to a comparison of mishaps and mishap rates, Wyle developed a Risk Factor analysis. The risk factor analysis offers base officials and citizens of Tucson a common vocabulary and fair method for comparing aircraft safety risks by objectively expressing the level of risk for aircraft operating out of Davis-Monthan. With the risk objectively and fairly expressed via the risk analysis, the two parties can engage in dialogue to accept or mitigate the future level of risk.

Part V, includes the above summary, plus the below findings and recommendations.

Findings

raft docut

- 1. Since 1978, there have been significant changes in Operations Snowbird's mission and operations. As stated in the 1978 EA, the original purpose for OSB was to enable ANG units in the northeast to conduct tactical training for two week periods between January and April. The purpose today, according to the National Guard Bureau, is to:
 - a. Facilitate leading edge world class aviation training for US and allied forces for irregular warfare, deployment spin-up, and military exercises/inspections through continuous improvement of training opportunities based on the lessons learned from current military conflicts.
 - b. Become the Irregular Warfare Center of Excellence for the Air National Guard
 - c. Provide access to a multiple realistic live and inert targets arrays on the Barry Goldwater Ranges
 - d. Allow access to the Link 16 and Gateway DATA link architecture in the Southwest US
 - e. Support US Military exercises and conferences by providing a quality facility

In addition to its mission change, the following changes have occurred at Operation Snowbird:

- i. None of the aircraft analyzed in the 1978 EA are participating in OSB today. Likewise, helicopters have been added to the mix of aircraft.
- ii. The timeframe for deployment has changed from two-week periods during January through April to deployments sometimes longer than 30 days during all twelve months of the year.
- iii. There were no foreign or joint aircraft analyzed in the 1978 EA.
- iv. In 2007, flight operations peaked, more than doubling from an estimated maximum of 1,600 per year to over 3,400 per year, and the flight hours correspondingly doubled from an estimated 1,940 per year to over 4,440 flight hours. As noted earlier, 1,400 of the 2007 F-16 sorties were 162d Fighter Wing sorties flown when TIA's runway was closed for repair. In 2008 and 2009, the number of Operations Snowbird operations declined to 938 sorties, 1,453.4 hours and 1,057 sorties, 1,908.4 hours respectively.
- v. Traffic pattern operations were not authorized in 1978. Since 1978, radar and instrument patterns have sometimes been conducted.
- vi. The daily flying window has expanded. The 1978 EA states, "Flying operations will be conducted during normal duty hours at Davis-Monthan AFB, 0800 1700." Today's OSB flying window is much expanded, to include Night Vision Goggle Training, a night time flying operation.

Finally, very little of the 1978 EA dealt with assessing the flight operations of the OSB aircraft flying within the DMAFB airspace, i.e., conducting arrival, departure and/or pattern operations. These flight operations are the primary concern for the people of Tucson.

2. One of the most comprehensive aspects of the National Environmental Policy Act (NEPA) is that it is applicable to all major federal actions significantly affecting the quality of our human environment. To be specific, the word 'major' means 'of consequence', the word 'federal' means under the control and/or of the responsibility of the federal government, and the word 'actions' means partially or completely federally funded, regulated, etc. . The NEPA protocol requires that an Environmental Impact Statements (EIS), containing a detailed and plainly written statement of need, alternatives, and environmental consequences, be completed before any action is taken. Further, the EIS will document the analysis of proposed "major' federal actions that significantly affect our human environment. The EIS must result in a Record of Decision which is prepared as a concise public document stating a decision, identifying all alternatives considered, listing specific environmentally preferable alternatives and stating the possible mitigation to avoid/minimize harm to the environment.

In August of 1978, the Council on Environmental Quality (CEQ) developed guidelines for preparing EISs which included two aspects of documentation the use of categorical exclusions and Environmental Assessments (EA), which were not originally contained in the National Environmental Policy Act of 1969. Categorical exclusions (CATEX) are applicable to actions which do not individually or cumulatively have a significant effect on the human environment, have been previously approved by CEQ or which have been found to have no significant effect. Because there is no approved CATEX to address OSB, use of an EA is the most benign methodology for addressing the potential impacts of OSB.

An EA is not an analysis, but is a concise public document which provides an assessment of an action for which the scope is limited to either completing a Finding of No Significant Impact (FONSI) or proceeding with an EIS. An EA cannot, by definition, document significant impacts.

14 November 2008, Davis-Monthan AFB officials signed and submitted an AF Form 813, Request for Environmental Impact Analysis," to Headquarters Air Combat Command. The AF Form 813 stated, "Proposed action does not qualify for a CATEX; further environmental analysis is required." It recommended: "an EA be prepared by a private consulting contractor." The Request for Environmental Impact Analysis was not approved.

3. November 2009, a Draft Air Installation Compatible Use Zone (AICUZ) Report was completed for Davis-Monthan AFB; it was based on data collected in 2007. The Draft AICUZ Study was an update initiated because of changes in aircraft operations since the last AICUZ Study in 1992. For its part, the Air Force perceives its AICUZ responsibilities as falling with the areas of flying safety, noise abatement, and participation in the land use planning process. To that end, the 2009 AICUZ was a reevaluation of aircraft noise and accident potential related to U.S. Air Force flying operations at Davis-Monthan AFB. These are the areas of concern for the citizens of Tucson, as evidenced by letters sent to public officials. Over the years, the public's interest in Operation Snowbird has waxed and waned.

November 2008 letter sent to the Secretary of Defense and courtesy copied to Senator Kyl reflects the publics' renewed interest in Operation Snowbird. Her letter was followed by several other letters from citizens concerned with aircraft noise and flight safety. There remains a need for a new AICUZ. The environment has changed: Tucson has grown. According to the 2009 Draft AICUZ, "Between 1990 and 2006, the population of the City of Tucson grew by more than 113,000, a 28 percent increase, and the population of Pima County grew by almost 280,000, a 41.9 percent increase.^{bvi}" OSB's mission has change: it has

evolved and grown. The prevailing AICUZ is dated. Davis-Monthan's bi-annual data collection for revalidation has been inconsistent. In short, there is a need for a reevaluation of aircraft noise and accident potential related to U.S. Air Force flying operations at Davis-Monthan AFB.

RECOMMENDATIONS

- 1. Air Force prepare a written environmental assessment (EA) to determine whether or not Operation Snowbird significantly impacts the Tucson environment. The prevailing EA, dated 1978, does not reflect the current level of operations nor type of aircraft flown in Operation Snowbird. Air Force should ensure the new EA includes an assessment of OSB flight operations within the DMAFB airspace, i.e., conducting arrival, departure and/or pattern operations. A new EA would re-establish the baseline of activities and provide a more realistic view of impacts associated with Operation Snowbird operations.
- 2. Air Force contract for a new AICUZ. The prevailing AICUZ, dated 1992, does not reflect the current level of operations. A new AICUZ would re-evaluate aircraft noise and accident potential related to U.S. Air Force flying operations at Davis-Monthan AFB.

References

i	ⁱ HISTORY of 836 th Air Division, Davis-Monthan Air Force Base and the 355 th Tactical Training Wing, 1
e	January – 31 March 1981, Volume 1, Narrative, SSgt Diego Melendez and Sgt Frank Podgorski, page 18.
i	ii El Tigre News (162d Fighter Wing base paper), March 2002, pg 9.
i	v E-mail from NGB/XP () to NGB/XO (), 25 April 2001.
v	y Snowbird DET, e-mail from Example 162 , 162 FW/CC to Example 162 , June 06, 2001.
v	ⁱ "Devastation," Jim Miller, Tucson Monthly, October 1998, page 33.
V	^{<i>ii</i>} Memorandum for ANG/XPME/OLTN, From Constant of , Subject Trip Report, Purpose CRTC – Snowbird (162 FW), 10 Sep 2001.
V C	ⁱⁱⁱ Operation Snowbird, PowerPoint Brief, Slide 2. Brief provided by Example 1998 , Operation Snowbird commander.
i	x http://www.epa.gov/compliance/nepa/index.html.
X	⁴ HISTORY of Twelfth Air Force, Bergstrom AFB, Texas 1979 by Office of History, pg 48. ⁴ A report to the UNIVERSITY OF ARIZONA FACULTY SENATE by the AIR TRAFFIC COMMITTEE,
ן []	UNIVERSITY OF ARIZONA, 31 March 1979, Walter J. Fahey, Ph.D., Electrical Engineering, Chairman; Ihomas E. Doran, Office of the President, Recorder; Louis J. Battan, Ph.D., Atmospheric Sciences; Jack D. Gaskill, Ph.D., Optical Sciences; Lay J. Gibson, Ph.D., Geography; James R. Glaze, Ed.D., Environmental Health & Safaty: David Mouat, Ph.D., Geography: Thomas P. Pohm, Ph.D., Chamical
ן א א	Environmental Treatm & Safety, David Modal, Fil.D., Geography, Thomas K. Kenni, Fil.D., Chemical Engineering; John S. Sumner, Ph.D., 'Geosciences.
2 X X	²⁷ September 1995, paragraph 1.1. ^{aii} Air Installation compatible Use Zone (AICUZ) Report, 10 January 1992, page 31. ^{aiv} Finding of No Significant Impact (FONSI), Environmental Assessment, Expansion of the Arizona Air National Cuard Engility, Davis Montan AFP, 27 September 1995, page 1
X	Wemorandum for 355 CES/DEO, ATTN:
X	^{xvi} Environmental Assessment, Expansion of the Arizona Air National Guard Facility, Davis-Montan AFB, 27 September 1995, paragraph 1.1.
x I	^{wii} Finding of No Significant Impact (FONSI), Environmental Assessment, Expansion of the Arizona Air National Guard Facility, Davis-Montan AFB, 27 September 1995, page 2.
Х	^{xviii} "Devastation," Jim Miller, Tucson Monthly, October 1998, page 30.
x I	^{dix} Finding of No Significant Impact (FONSI), Environmental Assessment, Expansion of the Arizona Air National Guard Facility, Davis-Montan AFB, 21 April 1999, page 2.
X	Environmental Assessment, Expansion of the Arizona Air National Guard Facility, Davis-Montan AFB, 21 April 1999,, paragraphs 1.1 - 1.2
I	National Guard Facility, Davis-Montan AFB, 19 June 1999, page 2.
X	^{axiii} Memorandum for ANG/XPME/OLTN, From Construction , Subject Trip Report, Purpose CRTC – Snowbird (162 FW), 10 Sep 2001.
X	wiv Memorandum for ANG/XPME/OLTN, From Constant of , Subject Trip Report, Purpose CRTC – Snowbird (162 FW), 10 Sep 2001.
x x	^{axv} El Tigre News (162d Fighter Wing base paper), March 2002, pg 9.
	Showbiru commander.

xxviii Letter from to Dr. James G. Roche, Secretary of the Air Force, 26 January

2005.

xxix Davis-Monthan AFB Final AICUZ Study November 2009, pages 2-18 - 2-19.

xxx Air from IMT 813, Request for Environmental Impact Analysis, 14 November 2008.

^{xxxi} Letter from to Honorable Robert M. Gates, Secretary of Defense, November 20, 2008. xxxii Letter from Sen Jon Kyl to Colonel Michael Chandler, Air Force Senate Liaison Office, 4 December 2008.

xxxiii Letter from Lt Gen Harry M. Wyatt III ,Director, ANG to Senator Jon Kyl, March 6, 2009.

xxxiv Letter from Lt Gen Harry M. Wyatt III .Director, ANG to Senator Jon Kyl, March 6, 2009.

xxxv Letter from to Senator Jon Kyl, March 25, 2009.

xxxvi Letter from Lt Col Marvin T. Baugh ,Office of the Secretary of the Air Force, to Senator Jon Kyl, May 7, 2009.

to Senator Jon Kyl, May 26, 2009. xxxvii Letter from

xxxviii Letter from Michael A. Fleishman to Honorable Robert M. Gates, Secretary of Defense, September 10, 2009.

xxxix HISTORY of Twelfth Air Force, Bergstrom AFB, Texas 1979 by Office of History, pg 47.

x¹ Environmental Assessment, Expansion of the Arizona Air National Guard Facility, Davis-Montan AFB, 27 September 1995, paragraph 1.1.

x^{li} Finding of No Significant Impact (FONSI), Environmental Assessment, Expansion of the Arizona Air National Guard Facility, Davis-Montan AFB, 21 April 1999, page 2.

xlii Talking Paper on GSU Status for Operation Snowbird, 5 Nov 00, 162 FW/LNG. xliii Operation Snowbird, PowerPoint Brief, Slide 3. Brief provided by Operation

Snowbird commander. xliv http://www.globalsecurity.org/military/agency/usaf/162fw.htm.

xlv Questions and Answers for the Wyle Group Regarding Operation Snowbird (OSB),

NGB/A3XO, 26 January 2010.

xlvi Letter from Lt Gen Harry M. Wyatt III ,Director, ANG to Senator Jon Kyl, March 6, 2009.

^{xlvii} E-mail: From: USAF ANG 162 OSB/CC

Wednesday, April 14, 2010 10:04 AM.

xlviii HISTORY of Twelfth Air Force, Bergstrom AFB, Texas 1979 by Office of History, pg 47. xlixxlix Memorandum for ANG/XPME/OLTN, From , Subject Trip Report, Purpose CRTC -Snowbird (162 FW), 10 Sep 2001.

¹ Operation Snowbird, PowerPoint Brief, Slides 3 & 7. Brief provided by , Operation Snowbird commander.

^{li} Ouestions and Answers for the Wyle Group Regarding Operation Snowbird (OSB). NGB/A3XO, 26 January 2010.

^{lii} Questions and Answers for the Wyle Group Regarding Operation Snowbird (OSB), NGB/A3XO, 26 January 2010.

^{liii} Questions and Answers for the Wyle Group Regarding Operation Snowbird (OSB), NGB/A3XO, 26 January 2010.

liv Air Installation compatible Use Zone (AICUZ) Report, 10 January 1992, page 31.

^{Iv} Air Installation compatible Use Zone (AICUZ) Report, 10 January 1992, page 31.

lvi Draft DMAFB AICUZ Study, November 2009, page 2-1.

. Sent:
Exhibit 4

FLYING OFF COURSE

Environmental Impacts of America's Airports

Principal Author and Researcher Jennifer Stenzel

Contributing Author and Researcher Jonathan Trutt

Contributor and legal research Carolyn Cunningham

Project Coordinator and Editor Richard Kassel



Acknowledgments

NRDC wishes to thank John R. Robinson for initiating, encouraging, and supporting this study, and The Beinecke Foundation, Inc. for providing the funds which made this project and report possible. As with all of our work, the support of NRDC's over 300,000 members was invaluable to the completion of this project.

Many colleagues at NRDC made substantive contributions to this report, including Daniel Lashof, Ph.D., Peter Lehner, and Diane Cameron. Thanks also to Basil Seggos, intern, for his help during the summer of 1995.

We are also indebted to many people at the U.S. Environmental Protection Agency, especially Leah Huser. At the Federal Aviation Administration we are indebted to: Tom Bennett, George Legarreta, Pat Beardsley, Nancy Trembley, and Akira Kondo.

Finally, we would like to express our special thanks to many other people in government agencies, airports, and institutions: Marie McLaws and Steven Parkin (Utah Department of Environmental Quality), Sandy Webb (Energy and Environmental Analysis, Inc.), Cary Greene (San Jose International Airport), Danette Lake (San Diego International Airport), Diane Summerhays (Seattle-Tacoma International Airport), Neal Philips (Metropolitan Washington Airports Authority), John Whitescarver (National Stormwater Center), Anne Kohut (*Airport Noise Report*), Rob Sliwinski (New York Department of Environmental Conservation); Barbara Dexter and Jim Utter (SUNY-Purchase, Natural Sciences Division), and Barbara Grey (Baltimore-Washington International Airport).

About NRDC

NRDC is a non-profit environmental membership organization with more than 300,000 members and contributors nationwide. Since 1970, NRDC scientists and lawyers have been working to protect the world's natural resources and to improve the quality of the human environment. NRDC has offices in New York City; Washington, DC; San Francisco; and Los Angeles.

Text Editor Elizabeth Hanson Cover Photo J. Kirk Condyles

Peer Review

We are indebted to the following specialists who reviewed drafts of the report, or selected chapters. Their comments greatly strengthened the final product. Their listing here does not constitute an endorsement of the findings or policy recommendations contained in the report.

The ground-level air emissions chapter was reviewed by Richard Wilcox, Senior Environmental Scientist, EPA, and Deborah Sheiman Shprentz of NRDC. The noise and land use chapter was reviewed by Arline Bronzaft, Ph.D. The climate change and energy efficiency chapter was reviewed by Chris Calwell, independent consultant, and Dan Lashof, Ph.D., of NRDC. The deicing and water quality issues chapter was reviewed by Peter Lehner and Diane Cameron of NRDC.

The entire report was reviewed by Karim Ahmed, Ph.D.

TABLE OF CONTENTS

Executive Summary	4
Introduction	13
Chapter 1: Noise and Land Use	16
Chapter 2: Ground-level Air Emissions	36
Chapter 3: Deicing and Water Quality	56
Chapter 4: Climate Change and Energy Efficiency	70
Glossary and Acronyms	80
Endnotes	85
Appendix A: Recipients and Respondents of NRDC's National Airport Survey	90
Appendix B: Questionnaire Used in NRDC's National Airport Survey	94
Appendix C: Results of NRDC's National Airport Survey	100
Index	193
Tables Table 1: Land Use Compatibility with Yearly Day-Night Average Sound Levels Table 2: Schedule of Phase-Out and Phase-In Alternatives Table 3: Estimates of Populations-at-Risk in Ozone Nonattainment Areas, October 1991 Table 4: Particulate and Toxic Emissions in Southwest Chicago, 1993 Table 5: Ozone Nonattainment Areas with Top 50 Airports Table 6: Ground-Level Air Carrier Emissions at Nine Airports in 1993 Table 7: 1993 VOC and NO _x Emissions in 3 States: Airports and Comparable Source Table 8: Air Carrier Emissions at Airports in Nonattainment Areas Table 9: Potential Emissions Reductions at Newark International Airport, 1993	25 28 38 39 41 44 55 49 52
Illustrations Figure 1: Airlines' Share of All Commercial Hours Flown Worldwide Figure 2: U.S. Air Carriers' Scheduled Passenger Enplanements Figure 3: Comparative Sound Values Figure 4: Air Carrier Flights, Actual and Forecasted Figure 5: New York City's 5 Largest Industrial VOC Sources Figure 6: Major NO _x Sources in the New York City Area Figure 7: Ground-Level VOC Emissions at Inventoried Airports Figure 8: Air Carrier Flights, Actual and Forecasted Figure 9: Lavels of the Atmosphere	13 14 20 30 36 37 46 50 72
Figure 10: Average Energy Intensities of U.S. Transport Modes Figure 11: Average CO. Emissions of U.S. Transport Modes	75 76

Figure 11: Average CO₂ Emissions of U.S. Transport Modes Figure 12: Energy Intensity of Intercity Transportation Modes Versus Stage Length

.

77

Although significant environmental impacts were common to most of the airports in our survey, the regulatory framework currently in place to address these impacts is inadequate. Because aviation is the fastest growing mode of transportation in the United States, these failings must be addressed.

In January 1995, the Natural Resources Defense Council (NRDC) undertook a study to determine: (1) the most important environmental issues connected with airports, and (2) the best management techniques airports were using to mitigate them.

The bulk of our data came from a nationwide survey that we conducted in the spring and summer of 1995. We mailed a seven-page questionnaire to the nation's 125 busiest airports, as defined by the Federal Aviation Administration (FAA) in terms of numbers of passengers, or enplanements. The questionnaire dealt with noise and land use, deicing and water quality, air pollution, expansion plans, and basic geographical information.

Forty-six of the 125 airports responded to our survey. In addition, we conducted in-depth research at government agencies on the country's 50 busiest airports.

We found that, while airports vary in terms of size and geographical characteristics, significant environmental impacts were common to most of the airports in our survey. We also found that the regulatory framework currently in place to address these impacts is inadequate. Because aviation is the fastest growing mode of transportation in the United States, increasing nearly twice as fast as motor-vehicle travel, these failings must be addressed. This report focuses on the environmental issues we found to be most significant: noise and land use, ground-level air emissions, water pollution, and, on a more global scale, climate change and energy efficiency.

NRDC recognizes and supports the critical safety concerns and requirements of the FAA, the airports, the airlines, and the flying public. These concerns and requirements have been taken into account in the recommendations of this report. Nothing recommended herein would compromise the safety of flying.

NOISE AND LAND USE

Aircraft noise — like many environmental problems — affects millions of people every day in myriad ways both short-term and long-term, both obvious and difficult to gauge. Studies indicate that noise affects one's ability to concentrate and can cause sleep deprivation, resulting in potentially deleterious effects on health and well-being. Some studies have also shown that continuous exposure to high levels of aircraft noise is associated with hypertension, cardiovascular and gastrointestinal problems, and other disorders.

Despite the phasing-in of newer, quieter aircraft, noise near airports will, in all likelihood, increase in the next century. U.S. passenger air travel is expected to continue its current strong growth trends: the FAA predicts international enplanements to increase at a rate of 5.3% annually for the next 12 years, and domestic enplanements to increase at a rate of 3.7%. Aircraft operations, of course, will likewise increase: according to the FAA, there will be 36% more flights in 2007 than there are today.

Airport communities often find themselves with little recourse in addressing noise impacts under the FAA's current noise policies. In particular, the noise threshold that the FAA has set as compatible with residential use ("65 dB DNL") is problematic because: (1) it is based on an **averaging** of noise, rather than the loud "single event" noise that specifically characterizes aircraft noise, and (2) the threshold of 65 dB significantly underestimates the level at which many people are annoyed or impacted by aircraft noise.

Findings

► NRDC's Airport Survey demonstrates that the aircraft noise problem in the United States will probably worsen: at least 32 of the 50 busiest airports in the country have plans for expansion. The FAA reports that 60 of the 100 largest airports in this country are currently proposing to build new runways or runway extensions.

► The FAA's threshold of 65 dB DNL does not accurately assess how many people are disturbed by aircraft noise. NRDC's Airport Survey found that, despite the relatively few people living within its 65 dB DNL noise contour, Denver International Airport received the highest number of noise complaints per month.

The most recent studies on noise and health have been conducted mostly in Europe rather than the United States. This is due, at least in part, to the current limited role of the U.S. Environmental Protection Agency (EPA) in the field of aircraft noise.
While most airports have some type of program in place to lessen noise for their neighbors (such as using flight paths farther away from residential areas at night), NRDC believes that a fundamental key to good aircraft noise policy lies in setting appropriate land uses adjacent to airports.

Recommendations

1. The sole use of DNL for measuring aircraft noise is inadequate. DNL as a mechanism for determining funds for noise mitigation measures and land use planning should be reevaluated with full public review. Specifically, NRDC recommends that:

Rather than DNL, CNEL (community noise equivalent level) should be used to adequately account for the importance of communication and relaxation during evening hours. The CNEL, used in California and many European countries, includes a 5 decibel penalty during the hours of 7:00 p.m. to 10:00 p.m. in addition to the DNL's 10 dB nighttime penalty.
The FAA should use 55 dB CNEL, rather than 65 dB DNL, as the threshold for planning and funding decisions.

► Single event noise must be taken into account when assessing the impacts of aircraft noise. Single events interrupt school lectures, wake people up, and interfere with speech intelligibility. The "single exposure level" (SEL), which measures the intensity of sound during a single noise event, should be used in conjunction with CNEL.

▶ Noise mitigation plans should be site-specific. Many factors need to be considered, including seven key issues identified by EPA over 20 years ago, which remain relevant:

1. Duration of intruding noises and frequency of occurrence

2. Time of year (windows open or closed)

3. Time of day of exposure

4. Outdoor noise level in community when intruding noises are not present

5. History of prior exposure to noise source

6. Attitude toward the noise source

7. Presence of pure tones or impulses.

NRDC's Airport Survey demonstrates that the aircraft noise problem in the United States will probably worsen: at least 32 of the 50 busiest airports in the country have plans for expansion.

Air pollution totals from cars and many major industries have stabilized or decreased with time, while aircraft emissions at U.S. airports have more than doubled since 1970.

2. Airports and municipalities should be required to provide full disclosure to potential airport neighbors regarding levels of noise they can expect.

Disclosure statements should include an airport's current noise levels, flight paths, and future expansion plans. A state or local "Community Right to Know Noise" Act (similar to the act that requires industries to divulge information on toxic releases to a community) should be developed and implemented. This act would require municipalities and realtors to disclose information about current and expected noise levels to potential residents within the 55+ dB CNEL.

3. The Office of Noise Abatement and Control should be reinstated within EPA, and funds allotted for research on noise and health. The EPA, more than any other federal agency, should lead study of the impact of aircraft noise on health and well-being. EPA is the agency most directly responsible for the protection and regulation of public health and welfare, while the FAA has other unrelated, and sometimes conflicting responsibilities.

GROUND-LEVEL AIR EMISSIONS

Noise tends to dominate debates over airport pollution, often to the exclusion of another important topic: ground-level ozone pollution, the primary component of smog. Smog is normally associated with motor vehicles and industrial sources such as factories, power plants, and incinerators. However, air pollution totals from automobiles and many major industries have stabilized or decreased with time while aircraft continue to emit more and more ground-level ozone precursors—volatile organic compounds (VOCs) and nitrogen oxides (NO_x)—with each passing year. For example, in 1993, airplanes at U.S. airports produced 350 million pounds of these pollutants during their landing and takeoff cycles (LTOs), more than twice their 1970 total. This total is likely to climb even higher as the aviation industry grows.

In order to better understand the relationship between aircraft emissions and local air pollution problems, NRDC calculated the amount of aircraft-generated VOCs and NO_x at nine U.S. airports. The airports selected for study were Chicago O'Hare (IL), John F. Kennedy International, LaGuardia International, and Westchester County in New York, Newark International (NJ), Bradley International (CT), Jacksonville International (FL), El Paso International (TX), and Fairbanks International (AK).

These airports were selected because they span a wide range in terms of the types and numbers of planes they handle. The list includes not only the nation's largest international airports but also smaller, yet busy, regional airports.

Findings

The results of NRDC's air carrier emissions inventories are as follows:

Airport & State	Landing & Takeoff Cycles (LTOs) per year ^(b)	VOC (tons/yr)	NO _x (tons/yr)
Chicago O'Hare (IL)	383,362	1.428	4,650
Newark (NJ)	140,109	914	1,916
LaGuardia (NY)	135,800	677	1,476
John F. Kennedy (NY)	80,337	1,027	1,879
Bradley (CT)	36,506	128	342
El Paso (TX)	29,752	48	258
Jacksonville (FL)	19,838	42	201
Westchester (NY)	9,145	18	42
Fairbanks (AK)	7,075	15	64

(a) Raw data generated using FAA software and data as well as airport-specific idle/taxi times. Actual VOC totals may be 10-15% less than reported due to fuel conservation measures voluntarily practiced by the airlines which also result in emissions reduction.

(b) Landing and takeoff cycles (LTOs) are the basis for ground-level aircraft emissions calculations. The components of an LTO are approach and landing, taxi/idle-in, taxi/idle-out, takeoff, and climbout. LTO cycle calculations include only the emissions planes create within 3,000 feet of the earth's surface, all of which affect ground-level air quality.

Airports are significant sources of ground-level VOC and NO_x emissions. Locally, an airport's arriving and departing planes can create as much, if not more, ground-level VOCs and NO_x as many of its largest industrial neighbors (see table).

State	Pollutant	Emissions Source	Rank in State ^(b)	Tons/yr
IL	VOC	Deere & Co. (Harvester Plant)	17	1,471
IL	VOC	Chicago O'Hare Airport		1,428
1L	VOC	All Steel, Inc.	18	1,367
IL ·	NO,	Granite Steel Company	21	4,819
fL.	NO,	Chicago O'Hare Airport		4,650
IL	NO _x	CPC Int'l (corn products)	22	4,439
UT	VOC	Geneva Steel	6	590 [·]
UT	VOC	Salt Lake City Int'l Airport		485
UT	VOC	Magnesium Corp. of America	7	438
UT	NO	Questar Pipeline Company	8	1,152
UT	NOĴ	Salt Lake City Int'l Airport		955
υτ	NOx	Chevron USA Salt Lake Refinery	9	743
ст	VOC	Quality Rolling (metal painting company)(c)	10	129
ст	VOC	Bradley Int'l Airport		128
СТ	VOC	Northeast Petroleum (storage facilities) ^(c)	11	112
ст	NO,	AES Thames (power plant) ^(c)	17	370
СТ	NOĴ	Bradley Int'l Airport		342
CT	NO	Dexter (paper mill) ^(c)	18	290

1993 VOC and NO_x Emissions in 3 States: Airports^(a) and Comparable Sources

Notes:

(a) Airport totals reflect ground-level emissions from air carrier flights. NRDC calculated the emissions for O'Hare and Bradley airports. The state of Utah provided the emissions data for Salt Lake City International Airport. Ground-level VOC totals from aircraft may be 10-15% less than reported due to fuel conservation measures voluntarily practiced by airlines which also result in emissions reduction.
 (b) Ranking is based on stationary source emissions inventories provided by the states of Illinois, Utah, and Connecticut.

(c) Refers to 1994 rather than 1993 data.

Airports are not regulated in the same way as other comparably large air pollution sources. Although aircraft engine prototypes have to meet certain emissions standards, neither airports nor airlines are held accountable for total ground-level aircraft emissions. ► Airports are not regulated in the same manner as other significant air pollution sources. Neither airports nor airlines are held accountable for the aggregate impacts of their ground-level aircraft emissions. State and local regulators remain nearly powerless to address the problem in meaningful ways, while other major industrial sources are accordingly forced to compensate on airports' behalf as states scramble to meet mandatory emissions reductions deadlines. The number of commercial flights (which burn the most fuel and cause the most pollution per operation) meanwhile grows higher and higher each year.

► A 1993 EPA-sponsored study of toxic emissions at Chicago's Midway Airport (a much smaller airport than Chicago's O'Hare, with about 3 million enplanements per year, compared with O'Hare's 30 million) suggests that toxic air pollution from aircraft deserves more attention. The study, conducted in response to community concerns, evaluated cancer risks attributable to all air pollution sources in southwestern Chicago. It indicated that Midway's arriving and departing planes constitute a considerable source of particulate air pollution as well as toxic compounds such as benzene, 1,3-butadiene, and formaldehyde, releasing far more of these pollutants than other industrial pollution sources within the 16-square mile study area. In fact, few of Chicago's industrial sources release as much benzene or formaldehyde as the planes flying into and out of Midway Airport. Nevertheless, airports are exempt from the federal law that requires other toxic sources to report their toxic emissions totals (the Toxic Release Inventory, or TRI).

Recommendations

 Treat airport-generated emissions in the same manner as emissions from other large sources and include them in state air pollution plans. Although airplane emissions at airports are comparable to those from industrial sources, they escape inclusion in State Implementation Plans (or SIPs), the EPA's principal means of achieving cleaner air in nonattainment areas. As states scramble to meet mandatory emissions reductions deadlines, other major industrial sources are forced to compensate for this omission. Allowing states to include control strategies for ground-level aircraft emissions in their SIPs would help them meet air quality goals.
 Minimize aircraft engine use while idling and taxling. VOC emissions (both toxic and non-toxic) at airports would be significantly reduced if all airlines instructed their pilots to shut down as many engines as possible during the idle and taxi period. This simple procedure would decrease emissions, as well as fuel costs. The FAA should issue an Advisory Circular on reduced-engine idling and taxing, encouraging airlines to employ the practice as often as possible.

3. Adopt more stringent NO_x standards. Ground-level NO_x emissions from aircraft can be curbed by tightening engine emissions standards. The UN-affiliated International Civil Aviation Organization (ICAO) tightened NO_x standards by 20% on January 1, 1996 and is currently considering tightening the standard an additional 16%. The European Union is supporting the tighter NO_x standard. However, the new standard is unlikely to be approved without U.S. support, which has, to date, been withheld. The United States needs to join its European counterparts in actively

supporting the additional tightening of this standard. Regardless of ICAO's ultimate decision, the United States should adopt the proposed standard as its own.

4. Address toxic aircraft emissions. EPA should carry out a nationwide investigation and risk assessment of aircraft emissions. If findings similar to its southwest Chicago study are reached elsewhere, then airports should be placed on EPA's list of major hazardous pollution sources. Whatever the outcome, airports — just as similarly-sized toxic air pollution sources — should be required to report their toxic emissions to the Toxic Release Inventory (TRI).

5. Investigate differential landing fees. Until local authorities can implement SIP control strategies for aircraft, they can address the problem of aircraft pollution indirectly. Airports can establish a revenue-neutral set of differential landing fees in order to encourage airlines to use their least-polluting planes.

6. Discourage auxiliary power unit use. Jets parked at airport gates often use generators (auxiliary power units or APUs) to power their electrical and climate control systems. Both emissions and fuel consumption could be reduced if planes shut off their APUs and relied on airport-provided power and air to the fullest extent possible. Southern California's airports are already electrifying their gates; airports in other nonattainment areas should follow their lead.

7. Convert airport vehicle fleets and ground service equipment to alternative fuels. Alternative-fuels programs already exist at many airports. Los Angeles International Airport (LAX), for example, operates 14 liquid natural gas (LNG) buses, and is ordering more. Boston's Logan Airport is converting its vehicles from diesel to natural gas and electric power. Centrally fueled and maintained airport-based fleets are excellent niches for alternative fuel vehicles; states and airports should create incentives for or require their conversion.

8. Encourage mass transit. Private vehicles at airports can produce as much VOC and NO_x as planes. Our survey shows that the overwhelming majority of airline passengers reach the airport in their own cars. Airport emissions totals could be considerably reduced if these people left their cars at home; mass transit use to and from airports should be promoted and developed at every opportunity.

DEICING AND WATER QUALITY

The presence of snow, ice, or slush on runways or aircraft frequently causes hazardous conditions that can contribute to aircraft accidents, delays, diversions, and flight cancellations. Consequently, deicing or anti-icing (preventing the formation of ice) of aircraft and runways is a necessary part of operations at most airports in winter months. The most common method of controlling ice is through the use of chemicals, particularly ethylene- or propylene-based glycol mixtures with additives.

Most airports were built long before environmental regulations governing polluted water "runoff" were in place, and many airports lack the infrastructure to control large quantities of deicing fluids. Deicing generally takes place directly on the tarmac; deicing chemicals then enter the runoff from this procedure and flow into nearby waterways. In 1987, under Clean Water Act revisions, stormwater runoff was finally recognized under federal law as a serious water pollution problem, and the national stormwater permit system was adopted to attempt to control polluted runoff from urban areas, including industrial sites.

Findings

► Given that many, if not most, of the country's largest airports are sited along waterways, the control and disposal of deicing chemicals constitutes a significant water pollution issue. Our survey found that 45 of the 50 busiest airports in the country were within three miles of an ocean, bay, lake, wetland, reservoir, river, or stream.

The runoff management systems that airports are required to implement under the national stormwater system is problematic, with gaps in the areas of effluent standards, enforcement, and monitoring.

The use of deicing chemicals (particularly ethylene glycol) and other toxic substances at airports may present threats to human health, particularly to airport workers.

▶ In addition to ethylene glycol, numerous hazardous substances such as solvents and metals are used at aircraft maintenance facilities. However, airports are exempt from reporting under the Toxic Release Inventory.

Recommendations

1. Aircraft deicing should be subject to a traditional effluent guideline **permitting process.** EPA could accomplish this by reinstating aircraft deicing in its Transportation Cleaning effluent guideline. Currently, aircraft deicing is covered inadequately under the more open-ended national stormwater program.

2. Ethylene glycol and the issue of worker health and safety needs to be further addressed. Given the toxic properties of ethylene glycol, the Occupational Safety and Health Administration (OSHA) should set appropriate exposure limits for ethylene glycol in deicing applications.

3. Stormwater pollution prevention plans should be public documents and should be available for public review directly from every airport. Incomplete, inadequate, or unimplemented plans should be subject to enforcement action on the same basis as other clean water permit violations.

4. Under the national stormwater program, the threshold that requires airports to monitor and sample outflows should be lowered to include smaller airports. While larger airports that use over 100,000 gallons of deicing fluids are required to monitor their outflows, sensitive receiving waters near smaller airports are left at risk.
5. More research should be conducted and information made available on alternatives to chemicals for deicing. FAA should revise its Advisory Circular on Airport Winter Safety and Operations (AC 150/5200-30A) to include information on the latest, least environmentally-damaging deicing procedures that also meet safety requirements.

6. Airports should be required to report releases of hazardous substances under the Toxic Release Inventory (TRI). (See also "Ground-level Air Emissions"). Ethylene glycol, widely used by airports, is a TRI-reportable substance, yet airports are exempt from TRI reporting.

Given that many, if not most, of the country's largest airports are sited along waterways, the control and disposal of deicing chemicals constitutes a significant water pollution issue.

CLIMATE CHANGE AND ENERGY EFFICIENCY

Though the primary environmental issues associated with airports are local, the aircraft themselves are responsible for global impacts. Transporting one person one mile by air requires more energy than by car, personal truck, bus, or train (at similar load factors). Though larger aircraft traveling longer distances can improve those efficiencies, it has been estimated that, currently, half of all airline flights are less than 500 miles. The emissions from aircraft engines, particularly carbon dioxide, nitrogen oxides, and water vapor, also play an increasingly significant role in global climate change and in ozone depletion. In addition, air travel is expected to grow at a faster rate over the coming decades than all other modes, further intensifying its environmental impacts.

A transportation system using airplanes with more efficient engines, supplemented by improved rail service, would likely result in less fuel use and fewer pollutants released into the environment. Newer, more efficient engines are generally quieter as well, since continuing public pressure to reduce airport noise helps prompt the redesign of engines.

Findings

▶ Studies show that, currently, aircraft are responsible for between 2-3% of total anthropogenic carbon dioxide (CO₂) emissions globally. This represents a modest, but increasing contribution to anthropogenic global warming effects.

• Aircraft also emit significant quantities of nitrogen oxides (NO_x) . Although there are some scientific uncertainties, studies show that about 4% of anthropogenic, atmospheric NO_x may be attributed to aircraft.

• Forecasts reveal that aircraft CO_2 and NO_x emissions could be responsible for 10% of all anthropogenic global warming effects by 2050.

▶ In addition to requiring more energy per passenger-mile than most other forms of transportation, airplanes also emit more CO₂ per passenger-mile than most other modes of transportation, because of their high energy intensity.

► Air travel is especially inefficient over short distances. Aircraft are most efficient for truly long distance travel, because they "amortize" the tremendous energy consumption associated with high speed takeoff over a greater number of miles and passengers (larger aircraft tend to carry more passengers and offer greater range).

► Much could be done to reduce energy consumption per passenger mile in aircraft, including improving the energy efficiency of the engines, improving aerodynamics, increasing average aircraft occupancy rates, increasing average trip length, and reducing idle time.

Recommendations

1. The United States should adopt more stringent NO_x standards. (See "Recommendations" on Ground-Level Air Emissions).

2. Airlines should invest in newer, more efficient aircraft. The federal government should provide financial incentives to airlines to accelerate acquisition

The emissions from aircraft engines, particularly carbon dioxide, nitrogen oxides, and water vapor, play an increasingly significant role in global climate change and in ozone depletion. of newer, quieter, more efficient aircraft and provide greater disincentives for airlines to retain older, less efficient aircraft. Currently, there is an opportunity to incorporate incentives for conserving fuel in the reinstatement of funding of the Aviation Trust Fund. Revenue that was collected through a 10% domestic ticket tax could instead be collected through an aviation fuel tax, thus providing an incentive to increase airline operational efficiency and to modernize the aging commercial fleet with more efficient airframes/engines. Unless a clear message is sent to aircraft manufacturers and airlines, efficiency improvements may fall by the wavside. Financial mechanisms that would funnel a tax on fuel back into the aviation industry are necessary to ensure that aircraft efficiency improvements are accomplished. 3. Supplement air travel with high-speed rail. National transportation planners and the Department of Transportation should further examine proposed plans for high-speed rail "pockets" throughout the country, such as the Boston-New York-Washington; Houston-Austin-Dallas; San Diego-Los Angeles-Sacramento; Portland-Seattle-Vancouver routes. Supplementing the aviation system with high-speed rail would greatly reduce the "short hops," for which air travel makes the least environmental sense.

4. Improve intermodal links, so that intercity rail connects to airports. For example, someone traveling from Paris to Philadelphia, landing in New York, should not have to get on another plane from New York to Philadelphia.

CHAPTER 1

NOISE AND LAND USE

Probably no issue having to do with airports is as volatile and controversial as noise. Aircraft noise has long been a public concern; the first Supreme Court case involving aircraft noise (*United States v. Causby*) was brought back in 1946.⁹ In *Causby*, a farmer contended that aircraft noise was so damaging to his property that the farm had been "taken" without just compensation, in violation of the Fifth Amendment. The Supreme Court agreed. The issue intensified throughout the 1960s as large, turbojet-powered commercial aircraft became a more common travel mode. Inevitably, with this growth came noise — and airport communities as well as areas under flight paths began to be burdened with the din of aircraft engines



Over a neighborhood in New York City, a plane zeroes in on Kennedy Airport. Aircraft noise will in all likelihood increase: NRDC's survey shows that at least 32 of the country's 50 busiest airports have plans for

expansion.

roaring overhead.

Aircraft noise — like many environmental problems — affects millions of people every day in myriad ways both short-term and long-term, both obvious and difficult to gauge. People who live close to airports suffer more than mere annoyance from ascending and descending aircraft. Studies indicate that noise can affect one's ability to concentrate and can cause sleep deprivation, resulting in deleterious effects on health and wellbeing. Some studies have also shown that continuous exposure to high levels

Photo: J. Kirk Condyles

of aircraft noise is linked to hypertension, cardiovascular and gastrointestinal problems and other disorders. Unfortunately, our environment is getting noisier by the day; noise is directly related to population growth, which, worldwide, is expected to reach just over 10 billion by 2050.¹⁰

The increasing noise trend is particularly significant for the United States, because U.S. passenger air travel is expected to continue to grow: FAA predicts international enplanements to increase at a rate of 5.3% annually for the next 12 years, and domestic enplanements to increase at a rate of 3.7%.¹¹ If these trends

continue, international passenger traffic will double by 2010, and domestic passenger traffic will double within the next 20 years. Aircraft operations, of course, will likewise increase: according to FAA, there will be 36% more flights in 2007 than there are today.¹² NRDC's Airport Survey further demonstrates that the aircraft noise problem in the United States will probably worsen: at least 32 of the country's 50 busiest airports have plans for expansion. FAA reports that 60 of the largest 100 airports in this country are currently proposing to build new runways or runway extensions.¹³ While advances in engine technology have resulted in quieter aircraft, and further noise reduction technologies can be expected, the projected continued growth in air travel threatens to cancel out these gains.

NOISE IMPACTS ON HEALTH

From hearing loss to disruption of speech communication and other daily activities, noise pollution has been widely documented to be potentially injurious to human health and welfare. Some of these impacts have been studied in depth, others only in a preliminary manner. In the United States, very few studies on noise and health have been performed within the last decade, though many references can be found from the 1970s.

That excessive noise can cause hearing loss is beyond dispute.¹⁴ Most hearing loss occurs when the ear is exposed to noise above 85 decibels over a considerable period of time — occupational noise, for example, at continuous levels of 85 decibels or more can cause hearing loss.¹⁵ The noise that people suffer near airports is, for the most part, less intense, because it is characterized by multiple short bursts of intensely loud single noise events rather than chronic levels of loud noise. Nevertheless, some studies have documented that aircraft noise can have significant impacts on the quality of health and well-being.

Stress-related Health Effects and Sleep Disturbance

Prior to the elimination of the EPA's Office of Noise Abatement and Control (ONAC) in the early 1980s, some U.S. studies found links between aircraft noise and sleep disruption, speech interference, hypertension, and cardiovascular and gastrointestinal functions.¹⁶ For example, a 1981 study found associations between aircraft noise and hypertension.¹⁷ This study reported that children attending elementary schools near Los Angeles International Airport (LAX), with over 300 overflights per day and with single event noise levels reaching 90 dBA, had higher systolic and diastolic blood pressure than did students living farther away from the airport.

Aircraft noise can also affect health as a result of sleep disruption. Studies indicate that being awakened during a sound sleep causes short-term effects such as sleepiness, irritability and poor work performance, and there may be long-term biological effects as well. Additionally, even if one is not actually awakened by noise, studies have shown that noise can disturb sleep patterns necessary for a restful night's sleep.¹⁸

Recent European studies have looked further into the issue of airport noise and health. A 1995 study found that elementary school children chronically exposed to air-

From hearing loss to disruption of speech communication and other daily activities, noise has been widely documented to be potentially injurious to human health and welfare. Aircraft noise has been shown to have an effect on the learning ability of children. Several studies have been conducted that appear to link lower educational test scores with a significant amount of aircraft noise. craft noise from Munich Airport had poorer long-term memory recall, reading comprehension, and overall tolerance levels than did children in a comparable urban environment unaffected by aircraft noise.¹⁹ The researchers also found neuroendocrinological and cardiovascular indices of chronic stress among exposed individuals.

A 1993 Dutch report stated that there was "sufficient" evidence to conclude that aircraft noise induced changes in sleep patterns and subjective sleep quality and could possibly cause coronary artery disease. This report also stated that there was "limited" but growing evidence that noise caused impacts on birth-weight, general psycho-social well-being, and work-related performance.²⁰

A 1992 British study of airport noise impacts on sleep appeared to contradict previous studies that had concluded that aircraft noise had an impact on sleep. Funded by the British Department of Transport and performed around Heathrow Airport in London, this study concluded that, "Once asleep, very few people living near airports are at risk of any substantial sleep disturbance due to aircraft noise."²¹ However, a panel of international sleep experts who peer-reviewed the study found that it had numerous flaws.²² Additionally, an American noise expert noted that the report concentrated only on sleep awakenings, not changes in sleep state.²³ In 1994, the U.S. Air Force sponsored a similar study on sleep disturbance, looking at affected populations near Castle Air Force Base and Los Angeles International Airport (LAX) in California; the authors' findings were consistent with the Heathrow study.²⁴ While this study corrected for some of the Heathrow study's shortcomings, it too was concerned only with awakenings, and did not examine changes in sleep patterns.

AIRCRAFT NOISE AND LEARNING

Aircraft noise has also been shown to have an effect on the learning ability of children. Several studies have been conducted that appear to link lower educational test scores with a significant amount of aircraft noise. A 1982 study sought to determine the effects of different levels of noise exposure on reading ability, using an analysis of schools in the vicinities of LaGuardia and John F. Kennedy International airports.²⁵ After controlling for racial, socioeconomic, and educational factors, the study concluded that high levels of environmental noise are inversely related to reading ability in elementary school children. Reading grades among these students increased the farther away from the airport the school was located. The exact mechanism by which noise affects learning is still being explored. However, one generally accepted hypothesis follows: the teacher, in the middle of a lecture, is forced to pause for the period of time it takes for a plane to pass overhead. After the plane passes, in addition to the concrete teaching time lost while pausing, the teacher must get the children's attention back, and then backtrack to where the lesson was interrupted.²⁶

The relationship between noise levels and human health and quality of life is a complex one. These studies cannot be taken as the definitive answer on the effects of aircraft noise on health. However, as noise continues to increase in the U.S., the issue warrants more research to fully understand the trends that numerous studies

have identified, as well as a public policy approach that minimizes the risk of exposure to unnecessarily high levels of noise.

MEASUREMENT OF AIRCRAFT NOISE

The measurement of noise (i.e., the impact of sound on humans) is an exacting, complex process, and is the subject of much heated debate between anti-noise advocates and noise regulators at the FAA. Mainly, the controversy centers around the measurement and threshold that the FAA uses (summarized as the "65 dB DNL" metric) to determine land use compatibility around airports, and to allocate funds for noise mitigation measures. NRDC believes that the 65 dB DNL threshold is flawed in two significant respects: (1) as an average noise measurement, the DNL masks the tremendous single-events of noise that are the most significant aspect of aircraft noise, and (2) the threshold of 65 dB underestimates the level at which many people are annoyed or impacted by aircraft noise and ignores evidence that would require analysis and mitigation of noise impacts at lower levels on a case-by-case basis. Since the FAA relies almost exclusively on 65 dB DNL measurements to guide airport noise mitigation programs and to determine land use compatibility, the result is often extremely frustrating for people living near airports or beneath noisy flight paths.

Description of DNL

The "day-night average sound level" (abbreviated DNL in text, symbolized L_{dn} in equations) is a level of noise derived by measuring average sound levels in a 24-hour day, in decibels. Nighttime noise, between the hours of 10:00 p.m. and 7:00 a.m., is "weighted," that is, given an additional 10 decibels to compensate for sleep interference and other disruptions caused by loud nighttime noise.²⁷ For airport noise exposure purposes, an annual average of the day-night average sound level is used.²⁸ Thus the DNL gives an average of a day's noise — then averaged over a year — with more weight given to nighttime noise.

Using this metric, airport planners and regulators can measure or model the noise levels around an airport by connecting locations with equivalent DNL levels. The resulting map, called a "noise exposure map" (or NEM), delineates intense noise areas and looks similar to a topographic map. The areas surrounding the airport and their corresponding DNL measurements are sometimes referred to as "noise contours." These maps are used extensively in the airport's noise planning and mitigation processes.

When thinking about noise measurement, it is important to keep in mind that decibels are measured on a logarithmic rather than a linear scale. An increase of 10 decibels means that a sound is heard as twice as loud, an increase of 20 decibels is heard as four times as loud, and so on. For example, a single noise event of 60 dB is twice as loud as 50 dB. The decibel scale is based on measurement of sound pressure, and reflects loudness. In the DNL metric, decibels have been "A-weighted," that is, converted to discriminate against low-frequency and very high-frequency sounds (which humans can-



Figure 3 Comparative Sound Values

* Four miles from airport.

Source: Scenic Hudson, Dealing with Airport Growth: Lessons from the Hudson Valley, p. 9.

not pick up) and focused to concentrate on what the human ear can hear.²⁹ Figure 3 illustrates various noises and their generally-accepted noise levels, in decibels.

While measuring sound is a fairly straightforward task, measuring its impact on a listener is a complex, more difficult endeavor. This task cannot be accomplished solely through measurements. The problem is one of establishing valid relationships between physical sound measurements, such as the DNL (an averaging approach) or SEL (a "single event" approach) or some other physical measurement, and prevalence of annoyance in a community. There are no simple answers: debate and research in this area continue.

Problems with DNL as the Sole Measurement for Aircraft Noise

The main problem with relying exclusively on the DNL metric to set airport noise policy is that it does not sufficiently reflect "single-event" noise impacts ("single-events" here refer to a single episode of particularly loud noise). Imagine that it is six o'clock a.m. on a work-day morning and, while you don't have to be up until 7:00, you are jarred out of sleep by an early morning flight from your local airport. While this noise event would be included in the DNL metric, its full impact (annoy-ance, stress, tiredness) would not be represented — instead, it would be diluted by the DNL averaging. The result is that, even if you are living in an area that FAA deems compatible for residences (the "65 dB DNL"—see next section), you could be exposed to single-event aircraft noises much higher than 65 decibels — sometimes upwards of 100 decibels.³⁰ In other words, residents within in the 65 dB DNL can be

Imagine that it is six o'clock a.m. and you are jarred out of sleep by an early morning flight from your local airport. While this noise event would be included in the DNL metric, its full impact would not be represented — instead, it would be diluted by the DNL averaging. exposed to levels of noise that are 8 times greater than the daily average.

Applying the DNL metric to the region around an airport obscures the fact that areas with similar DNL measurements often have vastly different noise profiles. One neighborhood may have a DNL level produced by a few incredibly loud flights, while another may have the same DNL level resulting from a more frequent barrage of quieter aircraft.

Another shortcoming of the DNL metric is that it does not recognize the importance of communication and relaxation in the evening hours. For example, imagine that after a long day at work, you are at home speaking on the phone — or in person — to a friend or family member, and you are forced to pause while a plane roars overhead, drowning out words. Again, the full impact of this event would be diluted into the DNL average. In recognition of this problem, the State of California (and many European countries) use a metric called the community noise equivalent level (CNEL), which adds a 5 decibel penalty during the hours of 7:00 p.m. to 10:00 p.m. in addition to the DNL's 10 dB nighttime penalty.

FAA's and EPA's DNL Thresholds: 65 versus 55 decibels

For purposes of land use planning and noise mitigation, FAA has set a decibel level of 65 dB DNL or lower as compatible with residential land use.³¹ However, in the 1970s, EPA had identified a noise level that it deemed necessary to protect the public health and welfare (with an adequate margin of safety) of 55 dB DNL, half as much average noise as the FAA level.³²

EPA based its recommendations on analyses, extrapolations, and evaluations of the scientific information that was available at that time.³³ EPA reached the conclusion that, allowing for a 5 decibel margin of safety, an outdoor level of 55 dB DNL would permit 100% intelligible speech indoors and also guarantee sentence intelligibility of 95% with normal voice levels outdoors at a distance of three meters. Specifically, EPA's conclusions were as follows:

Outdoor yearly levels on the L_{dn} [DNL] scale are sufficient to protect public health and welfare if they do not exceed 55 dB in sensitive areas (residences, schools, and hospitals). Inside buildings, yearly levels on the L_{dn} scale are sufficient to protect public health and welfare if they do not exceed 45 dB. Maintaining 55 L_{dn} outdoors should ensure adequate protection for indoor living.³⁴

In examining community noise, EPA took several factors into account which, by their nature, cannot be reflected in a simple measure of exposure. NRDC believes that these factors should come into play when considering noise planning and policy:

1. Duration of intruding noises and frequency of occurrence

2. Time of year (windows open or closed)

3. Time of day of exposure

4. Outdoor noise level in community when intruding noises are not present

5. History of prior exposure to noise source

6. Attitude toward the noise source

7. Presence of pure tones or impulses.³⁵

In adopting a threshold of 65 dB DNL, FAA rejected EPA's health-based recommendations and chose, instead, to balance the protection of public health and welfare with competing economic and technological considerations. NRDC believes that taking these factors into account in airport planning and policy would result in improved health and quality of life for people living near airports.

In adopting a threshold of 65 dB DNL, FAA rejected EPA's health-based recommendations and chose, instead, to balance the protection of public health and welfare with competing economic and technological considerations. The result has been that many residents living in areas outside the 65 dB DNL are disturbed by airport noise, yet find themselves with little or no recourse under federal regulations.

The Failure of 65 dB DNL: Westchester County Airport, Denver International Airport, and O'Hare International Airport

In a study spanning five years at Westchester County Airport (WCA) in White Plains, New York, NRDC found that 99.3% of noise complaints to the airport's noise abatement office fell outside — that is, at noise levels that were below — the 65 dB DNL contour (see box).

NRDC's Study of Noise at Westchester County Airport

Westchester County Airport is located in a mostly residential and suburban area, and is similar to many other airports in its mix of aviation and commercial jet operations. Once a sleepy country airport, Westchester County Airport (WCA) has grown to be one of the New York City region's busiest reliever airports. In the late 1980s, WCA began to see a sharp rise in commercial flights; coupled with plans for more modern and expanded facilities, the result was an atmosphere of much controversy and debate, despite the airport's establishment of one of the nation's first noise abatement offices and other communityoriented noise mitigation strategies. In 1990, after an extremely close public referendum vote, the County began constructing new passenger terminal facilities that had been outlined in the airport's 1986 Master Plan Update.

In 1991 NRDC began a study to determine (1) whether trends could be established among the thousands of noise complaints the WCA Noise Abatement Office receives annually, trends that would help airport planners and others predict when and where excessive aircraft noise impacts would be felt and (2) to evaluate the effectiveness of FAA's methodology for measuring noise and determining land-use compatibility and noise mitigation strategies.

NRDC conducted a five-year case study of the FAA noise metric at WCA by correlating the numbers of flight operations with the DNL contours at WCA and with actual noise complaints logged at WCA's Noise Abatement office.

We found that the overwhelming majority of noise complaints (99.9%) at WCA fell outside the 65 dB DNL contour. Even a 60 dB DNL noise threshold would not adequately protect WCA neighbors from what they considered to be excessive noise. Over 95% of the noise complaints fell outside the 60 dB DNL contour.

NRDC concluded that the application of the FAA aircraft noise guidelines at WCA was an inadequate method of predicting and measuring aircraft noise annoyance and other noise impacts on the communities surrounding WCA, and reliance on a 60 or 65 dB DNL threshold would not result in meaningful noise mitigation strategies.

Another interesting case is the new Denver International Airport (DIA) which opened on February 28, 1995. Part of the original rationale for building DIA was its distance from existing residential properties in Denver and its suburbs. However, since DIA opened, its Noise Abatement Office has been inundated with complaints. Our survey demonstrated that while DIA had one of the smallest populations of people living within the 65 dB DNL contour (150 people), the airport had the highest number of noise complaints per month (2,500) of all top 50 airports. We suspect that this is because of two factors: 1) that the people living near DIA had not previously been exposed to aircraft noise; and 2) DIA was built in what was originally a very quiet area, so the overall noise level without aircraft noise was quite low. Both of these factors are listed in EPA's seven factors to examine when considering community noise.

A recent lawsuit over noise from O'Hare International Airport in Chicago further illustrates problems with 65 dB DNL. In 1982, as part of an environmental impact statement completed when O'Hare was planning to expand, the FAA ordered the city of Chicago to soundproof a number of schools in the vicinity of the airport. The city of Chicago took the position (supported by FAA), that only the schools within the 65 dB DNL would be eligible for soundproofing. Since then, Chicago has implemented one of the largest school soundproofing programs in the country. According to our survey, 36 schools around O'Hare have been soundproofed or are currently being soundproofed, and 10 schools near Midway Airport have been soundproofed. However, numerous schools were still affected by aircraft noise from O'Hare (and were outside the 65 dB DNL). In February, 1996, a seven-year lawsuit brought by the county of DuPage and several DuPage county school districts was settled, with a \$12.2 million settlement to sound proof more than 20 schools farther away from the airport. These schools were estimated to be in a DNL contour of less than 60 dB. The lawsuit relied on testimony and affidavits from teachers in the affected schools, who stated that their students' ability to concentrate was impaired by aircraft noise from O'Hare.36

REGULATORY FRAMEWORK

Historically, the FAA has been the primary regulatory body guiding aviation noise policy. While aircraft noise is probably the most widely regulated of all sources of community noise, the problem remains intractable and unsolved. In part, this may be due to the fact that the fundamental mandate of aviation's guiding regulatory body, FAA, does not specify protection of the environment; rather, the FAA's policy is to foster the safety and economic development of the American aviation system.³⁷ Additionally, while a 1990 law brings us increasingly quieter engine technology, strong projected growth in air travel threatens to cancel out these gains.

ONAC and the Noise Control Act of 1972

As a sub-chapter of the 1970 Clean Air Act, Congress included a section on noise abatement in which Congress authorized the establishment of the Office of Noise Abatement and Control (ONAC) within the Environmental Protection Agency.³⁸ This action reflected public sentiment, which was growing increasingly intolerant of

escalating aircraft noise. ONAC was directed to study noise and its effect on public health and welfare, and on wildlife. Congress revisited the noise issue in 1972 and passed the Noise Control Act.³⁹ The Noise Control Act (NCA) directed EPA to publish scientific information about the effects of noise, including sound levels that would protect public health and welfare with an adequate margin of safety.

In 1981, the Reagan Administration cut funding for the Office of Noise Abatement and Control. However, the NCA was not repealed. As a result, technically the EPA still has some jurisdiction over aircraft noise, but no funds to implement programs or provide sponsorship for scientific research projects.⁴⁰

The Avlation Safety and Noise Abatement Act of 1979

In 1979, Congress passed the Aviation Safety and Noise Abatement Act (ASNA).⁴¹ ASNA established a voluntary program (called "Part 150"), which allows airports to apply for federal funding to implement noise mitigation measures including residential soundproofing, acquisition of noise-sensitive land around airports, and recommendations for development near airports.⁴² In passing ASNA, Congress intended to address the growing conflicts over airport noise between airports and their surrounding communities and to help protect airports from potential liability for damages they might incur from airport noise.⁴³ Congress designed ASNA to accomplish this goal in three ways. First, to assure the aviation industry of a nationwide, uniform system of noise compatibility programs and to provide the FAA with a simplified procedure for judging competing applications for noise mitigation funds, Congress directed the FAA to establish a single system of measuring noise. Second, it authorized federal funds to develop noise exposure maps around airports and to modify land uses (and/or acquire land) in accordance with these maps to mitigate airport noise impacts. And third, it defined "compatibility" in terms of interstate commerce concerns and local land use compatibility, thereby rejecting the health and welfare-based threshold of noise exposure developed by the EPA only five years before.⁴⁴ ASNA also insulated airports that participate in the Part 150 program from private lawsuits for noise damages under certain conditions.⁴⁵ Part 150 designates a decibel level of 65 dB DNL as compatible with residences - a level twice as loud as EPA's earlier health and welfare-based threshold of 55 dB DNL.⁴⁶ Table 1 illustrates the land uses designated by FAA to be compatible with various DNL levels.

Table 1

Land Use Compatibility with Yearly Day-Night Average Sound Levels

Land Use	Yearly day-night average sound levels (Ldn) in decibels					
	Below 65	65-70	70-75	75-80	80-85	Over 85
Residential						
Residential, other than mobile homes						
and transient lodgings	Y	N ⁽¹⁾	N ⁽¹⁾	N	N	N
Mobile home parks	Y	N	N	N	N	' N
Transient lodgings	Ý	N ⁽¹⁾	N ⁽¹⁾	N ⁽¹⁾	N	N
Public Use						
School	Y	N ⁽¹⁾	N(1)	N	N	N
Hospitals and pursing homes	Ŷ	25	30	N	Ň	Ň
Churches, auditoriums, and	•					
concert halls	Y	25	30	N	N	ÌΝ.
Covernmental services	Ŷ	v	25	30	N	Ň
Transportation	v.	v.	V(2)	V(3)	V(4)	V(4)
Derking	v.	v'	V(2)	V(3)	V(4)	N
Parking	I I	ſ	1,	T,	1. ,	r n
Commercial Use						
Offices, business and professional	Y	Y	25	30 .	N	N
Wholesale and retail— building						
materials, hardware and farm						
equipment	Ŷ	Y	Y ⁽²⁾	Y ⁽³⁾	Y ⁽⁴⁾	N
Retail trade— general	Y	Y	25	30	N	N
Utilities	Y	Y	Y ⁽²⁾	Y ⁽³⁾	Y ⁽⁴⁾	N
Communication	Y	Y	25	30	N '	N
Manufacturing and Production						
Manufacturing general	Y	Y '	Y(2)	Y(3)	Y(4)	N
Photographic and optical	Ý ·	Ý	25	30	Ň	N
Agriculture (except livestock and	•	•	2.9	50		
orestry).	Y	Y ⁽⁶⁾	Y ⁽⁷⁾	Y ⁽⁸⁾	Y(6)	Y(8)
Livestock farming and breeding	Ý.	Y(6)	Y(7)	Ň	Ň	Ň
Mining and fishing resource	•	-	•	••		••
production and extraction	Y	Y	Y	Y	Y	Y
Peerestion						
Outdoor sports arenas and						
sportator sports archus and	v	V (5)	√ (5)	N	N	N
Outdoor mucio cholic amphithoators	v.	N	N	N	N	N
Netwo exhibits and zeep	v v	V		N N	N	N N
Amusements parks resorts	r	1	IN	(N	n –	IN I
and campa	v	v	v	N	N	N
Golf courses, riding stables.		•		(T	1	IN I
and water recreation	Y	Y	25	30	N	N

Key:

Y (Yes)=Land use and related structures compatible without restriction.

N (No)= Land use and related structures are not compatible and should be prohibited.

NLR= Noise Level Reduction (outdoor to indoor) to be achieved through incorporation of noise attenuation into the design and construction of the structure.

25, 30, or 35= Land use and related structures generally compatible; measures to achieve NLR of 25, 30, or 35 dB must be incorporated into design and construction of the structure.

Notes:

(1) Where the community determines that residential or school uses must be allowed, measures to achieve outdoor to indoor Noise Level Reductions (NLR) of at least 25 dB and 30 dB should be incorporated into building codes and be considered in individual approvals. Normal residential construction can be expected to provide a NLR of 20 dB, so reduction requirements are often stated as 5, 10, or 15 dB over standard construction and normally assume mechanical ventilation and closed windows year round. However, the use of NLR criteria will not eliminate outdoor noise problems.

 Measure to achieve NLR 25 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas, or where the normal noise level is low.
 Measures to achieve NLR of 30 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas, or where the normal noise level is low.

(4) Measures to achieve NLR of 35 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas, or where the normal noise level is low.

(5) Land use compatible provided special sound reinforcement systems are installed.

(6) Residential buildings require an NLR of 25.

(7) Residential buildings require an NLR of 30.

(8) Residential buildings not permitted.

Source: 14 C.F.R. § 150, App. A, Table 1

The Part 150 Program in Action

The Airport Noise Compatibility Planning Program (the Part 150 program) is voluntary. Of the nation's more than 500 commercial airports, 232 have participated to date.⁴⁷ NRDC's survey showed that a majority of the country's busiest airports — 34 of the top 50 — have participated or are participating in Part 150 programs. However, it is interesting to note that the two airports with the highest numbers of people living within the 65 dB DNL contour have decided not to participate in Part 150: LaGuardia Airport (195,000 people) and Miami International (163,234 people). This may be because implementing a Part 150 program in these cases would constitute a tremendous undertaking.

The Part 150 program can be a useful tool for airport planners who seek to design noise abatement programs specific to their particular airport and community; however, Part 150 has a number of drawbacks and limitations:

1. One of the weaknesses of the 150 program stems from the nature of local zoning control. Airport officials often recommend to a city that certain areas near airports not be zoned for residential use, but local officials frequently turn a deaf ear and zone areas near airports as residential anyway. Later, when people move into these areas and complain of aircraft noise, it is the airport staff who are held responsible. For this reason, NRDC recommends that municipalities implement a "community right to know noise" law that would require noise-related disclosures to citizens considering purchasing homes near an airport.

2. Another problem, discussed earlier, involves residents living outside of the 65 dB DNL who are disturbed by aircraft noise. FAA funds for soundproofing and other measures are almost always limited to residents within the 65 dB DNL; but, as we have seen, residents outside the 65 dB DNL can be exposed to high levels of aircraft noise — and find themselves with no recourse.⁴⁸

3. Development of a Part 150 program is an incredibly time-and resource-consuming process, often involving years of public hearings, development of a factual record, the preparation of master plans, DNL maps, environmental assessments, and the like. Often, years can pass before residents within the 65 or above dB DNL receive assistance — and some mitigation measures, like soundproofing, provide only limited relief and condemn residents to living indoors, with the windows shut, even in mild weather. As an example of how long the process can take, the Part 150 program for San Jose International Airport in California was written in July 1985, but it was not until 1994 that the large-scale soundproofing program actually began (see box).

San Jose International Airport and Avigation Easements

San Jose International Airport in California began Phase I of its Part 150 planning in July 1985; soundproofing was the major objective. Fifteen-hundred dwellings were eligible, and the airport has begun soundproofing 125 homes. This large-scale effort began in 1994. The long delay was attributed to two factors: (1) the airport concentrated first on acquiring homes within high noise contours; and (2) the airport requested an avigation easement in return for the soundproofing.

When airports undertake soundproofing as part of their 150 plan, they generally ask residents for an "avigation easement" in return. In these cases, an avigation easement stipulates that the person's property is exposed to aircraft noise, and provides legal protection to the airport against noise lawsuits. Many citizens object to signing an avigation easement, and the citizens living near San Jose airport refused to sign. Eventually the airport dropped the request for an avigation easement for single-family homes.

Source: Cary Greene, Airport Planner, City of San Jose, telephone communication, 8/8/95, 3/21/96.

Noise Exposure Maps

The Part 150 program recommends that noise exposure maps be updated every 5 years, or when a change in operations results in an increase in the DNL of 1.5 dB or greater.⁴⁹ We received a wide range of responses when we asked survey respondents the date of their most recent noise exposure map. For a variety of reasons, many airports do not update these maps every five years. One explanation may be that, as newer, quieter planes are being phased into commercial fleets in response to the Airport Noise and Capacity Act, 65 dB DNL noise contours at many airports are shrinking. Some airport planners are apprehensive that shrinking contours will result in increased pressure for residential development near the airport; later, when people move into these areas and are bothered by aircraft noise, funding for mitigation programs will not be available.⁵⁰

The Airport Noise and Capacity Act of 1990

The most recent legislation governing aircraft noise, the Airport Noise and Capacity Act of 1990 (ANCA), is perhaps the most controversial. The law promises quieter engine technology by the year 2000, but it has made it virtually impossible for airports to

impose any new, local, mandatory noise restrictions, as was possible prior to the enactment of this Act.

Realizing that the noise issue would have to be addressed if the aviation system



A low-flying plane over a neighborhood. Poor planning decisions often result in residential development too close to airports.

was to continue to grow, Congress enacted the Airport Noise and Capacity Act (ANCA) in 1990.⁵¹ ANCA requires all commercial airlines to convert their fleets (specifically, all aircraft weighing more than 75,000 pounds) from aircraft meeting Stage 2 noise certification levels to aircraft that meet the quieter Stage 3 noise certification levels⁵² by 2000, with interim compliance dates in 1994, 1996, and 1998.⁵³ Table 2 illustrates the options airlines have for meeting these compliance dates.

Compliance Date	Phase-Out Schedule Maximum percentage of base-level Stage 2 aircraft	Phase-In Schedule Minimum percentage of Stage 3 alrcraft
December 31, 1994	75%	55%
December 31, 1996	50%	65%
December 31, 1998	25%	75%
December 31, 1999	0%	100%

Table 2 Schedule of Phase-Out and Phase-In Alternatives

Source: 14 C.F.R. § 91.865.

Airlines are meeting this requirement either by (1) replacing their older Stage 2 aircraft with newer Stage 3 aircraft, or (2) adding noise reduction equipment to their Stage 2 aircraft (a process called "hushkitting"). As of December 31, 1994, FAA estimated that 66.3% of the nation's domestic fleet was Stage 3, which is above the minimum percentage of 55% required by this interim date by ANCA.⁵⁴ Preliminary FAA statistics for 1995 indicate that the nine major U.S. carriers (America West Airlines, American Airlines, Continental Airlines, Delta Airlines, Northwest Airlines, Southwest Airlines, TWA, USAir, and United Airlines) had an average fleet mix of 70% Stage 3 aircraft.⁵⁵ The carrier with the lowest percentage of Stage 3 is TWA; the airlines with the highest percentages are America West and Southwest, at 78% Stage 3. As of March 1996, the fleet mixes of the major carriers were as follows:⁵⁶

<u>Carrier</u>	Percentage of Stage 3 Aircraft
America West	78%
Southwest	78%
American Airlines	75%
United	70%
USAir	73%
Delta	65%
Continental	65%
Northwest	50%
TWA	47%

The fleet mixes of major U.S. cargo carriers were as follows:

UPS	97%
Federal Express	58%
Emery	51.5%

FAA has stated that it is "confident" that all airlines will meet the December, 1996 requirement of 65% Stage 3.57 In our survey, we found that Stage 3 flights are dispersed widely among airports. Seven of the top 50 airports in the country were still below 60% Stage 3 flights as of 1995: Miami International (54%), Detroit Metropolitan Wayne County (50%), Minneapolis-St. Paul International (48%), Charlotte-Douglas International (55%), Raleigh-Durham International (57.5%), William P. Hobby Houston (50%), and New Orleans International (57.5%). In general, we found that the larger airports were more likely to have greater Stage 3 percentages, perhaps because the larger airports tend to receive a lot of neighborhood pressure and, in turn, may pressure the airlines that use it. One exception is Minneapolis-St. Paul, ranked 13 on the "top 50" list, with only 48% Stage 3, probably because Minneapolis-St. Paul is the hub of Northwest Airlines, which has one of the oldest fleets of all the major U.S. air carriers. At the other end of the spectrum, Westchester County Airport, ranked as the 109th busiest airport, has 75% Stage 3 commercial operations (100% Stage 3 "commuter" operations - smaller, turboprop aircraft), and 92% Stage 3 corporate jet operations.⁵⁸ An active citizens group in Westchester closely monitors the airport's activities, and has highlighted the issue locally.

At many of the airports in our survey, the phasing-in of Stage 3 aircraft has resulted in a decrease in the number of people living within the 65 dB DNL area. FAA expects the areas to shrink still further till the year 2000, when the phase-in will be complete. However, FAA predicts air traffic to grow at strong annual rates through the next century — if current trends continue, international passenger traffic will double by 2010, and domestic passenger traffic will double within the next 20 years.⁵⁹ So, while aircraft will be quieter, there will be more of them. Figure 4 depicts how aircraft operations will rise to the year 2007, when they will have increased by 35%.

While average noise may decrease or level off, there will be more of the loud single-event noises that characterize the most troublesome aspect of aircraft noise and are the most burdensome to airport communities.

ANCA and Curfews

ANCA creates an involved regulatory process for any airport that wants to impose a capacity or access restriction such as a curfew on flights. ANCA states that an airport would have to prove that:

the proposed restriction is reasonable, nonarbitrary, and nondiscriminatory;
 the proposed restriction would not create an undue burden on interstate or foreign commerce;

(3) the proposed restriction would maintain safe and efficient use of navigable airspace;

(4) the proposed restriction would not conflict with an existing federal statute or regulation;

(5) the applicant has provided adequate opportunity for public comment; and
(6) the proposed restriction does not create an undue burden on the national aviation system.⁶⁰

Although average levels of noise near airports may stabilize or even decrease with the introduction of quieter Stage 3 aircraft, the sharp increase in the total number of flights is creating more of the loud single-event noises that are the most troublesome for airport communities.

Figure 4 Air Carrier Flights, Actual and Forecasted



Source: FAA Aviation Forecasts, Fiscal Years 1996-2007, p. IX-32.

Development of this criteria is so time-consuming, and requires such sophisticated, costly analysis that few airports could feasibly carry it out. According to our survey and research, there have been no new mandatory curfews imposed at the top 50 airports after 1990. However, many of the airports in our survey had some type of noise restriction in place. A noise restriction can mean one of several things, including:

a limit on arrivals and/or departures during certain hours of airport operation;

 preferential runway use — taking off or landing away from residential areas during certain hours;

a limit on engine "run-ups" (engine maintenance — revving) during certain hours.

Some airports — such as Seattle-Tacoma (Sea-Tac) – have developed creative programs to lessen noise for their neighbors (see box).

CONCLUSIONS AND RECOMMENDATIONS

Studies show that aircraft noise has significant adverse effects on the health and wellbeing of those living near airports. Noise angers people and causes stress, which in turn can cause illness. Given FAA's forecasts of strong growth in U.S. air passenger traffic, noise around airports will probably worsen. Curfews and restrictions are an important tool for airport operators to lessen noise for airport communities. However, NRDC believes that one fundamental key to good aircraft noise policy lies in land use. Preventive measures such as appropriate zoning for land uses around airports and disclosure to airport neighbors about the noise they can expect is critical.

Sea-Tac's Noise Budget

At Sea-Tac, each airline is allowed to make only a certain amount of noise per year. This amount shrinks with each passing year until 2001. Every three months, the airlines' actual noise contribution is calculated by considering the types of planes it flies and the times during which it flies them. In order to stay within their noise allotments, the airlines have to either (1) increase the percentage of Stage 3 planes in their fleet or (2) reduce their number of nighttime operations.

This program was adopted in 1990, some months before ANCA took effect; today, it would be nearly impossible to implement such a program.⁶¹ ANCA mandates that all aircraft meet Stage 3 standards by 2000, but Sea-Tac's noise budget encourages a faster turnover. Sea-Tac also has a restriction on Stage 2 flights during the hours of 10:00 p.m. to 7:00 a.m. This restriction, combined with the noise budget, has resulted in a 3 dB decrease in noise around the airport from the years 1990 to 1995, according to Diane Summerhays, who manages the airport's noise abatement office. Additionally, Sea-Tac's fleet has gone from 50% Stage 3 in 1990 to its current 84%.

Although Sea-Tac has one of the most progressive noise abatement programs in the country, its relationship with citizens groups is nonetheless adversarial. The Port of Seattle's plans to build a third runway at Sea-Tac have engendered anger and opposition from residents near the airport. This situation illustrates the nation-wide paradigm of a growing aviation industry juxtaposed with people unwilling to accept more noise in their neighborhoods.

Source: Diane Summerhays, Noise Abatement Officer, Sea Tac International Airport, telephone communication, October 24, 1995.

NRDC recommends the following:

1. The sole use of DNL for measuring aircraft noise is inadequate. DNL as a mechanism for determining funds for noise mitigation measures and land use planning should be reevaluated with full public review. Specifically, NRDC recommends that:

► Rather than DNL, CNEL (community noise equivalent level) should be used to adequately account for the importance of communication and relaxation during evening hours. The CNEL, used in the state of California and many European countries, includes a 5 decibel penalty during the hours of 7:00 p.m. to 10:00 p.m. in addition to the DNL's 10 dB nighttime penalty.

► FAA should use 55 dB CNEL as a threshold for planning and funding decisions.

► Single event noise must be taken into account when assessing the impacts of aircraft noise. It is single events that specifically characterize aircraft noise, rather than average noise, such as highway traffic. Single events interrupt school lectures, wake people up, and interfere with speech intelligibility. The "single exposure level" (SEL), which measures the intensity of sound during a

single noise event, should be used in conjunction with CNEL.

► Noise mitigation plans should be site-specific. EPA's "seven factors" should be taken into account.

Taken together, these recommendations underscore the need for a new aircraft noise measurement that combines CNEL with SEL (or a similar measurement of single events). For planning and noise mitigation purposes, the threshold of 55 dB should be used.

2. Airports and municipalities should be required to provide full disclosure to potential airport neighbors regarding levels of noise they can expect. Disclosure statements should include an airport's current noise levels, flight paths, and future expansion plans. A state or local "Community Right to Know Noise" Act (based on an existing act that requires industries to divulge toxic releases to the community) should be developed and implemented. This act would require municipalities and realtors to provide potential residents within the 55+ dB CNEL with appropriate information about noise levels they can expect.

3. The Office of Noise Abatement and Control should be reinstated within EPA, and funds allotted for research on noise and health. The EPA, more than any other federal agency, should lead study of the impact of aircraft noise on health and well-being. EPA is the agency most directly responsible for the protection and regulation of public health and welfare, while the FAA has other unrelated, and sometimes conflicting responsibilities.

SUMMARY OF NOISE AND LAND USE SURVEY RESULTS

The following selected survey results are from the portions of NRDC's questionnaire that dealt with noise and land use, and pertain to the 50 busiest U.S. airports. Appendix A contains a list of survey recipients and respondents and Appendix B contains a copy of the questionnaire. For information on all top 50 airports, as well as every airport that responded to our survey, see Appendix C.

65 dB DNL Populations

Highest:	194,972	(LaGuardia Airport, New York)
	163,234	(Miami International, Florida)
	93,860	(Chicago O'Hare International Airport, Illinois)
	81,621	(William B. Hartsfield International Airport, Georgia)
	79,960	(Chicago Midway Airport, Illinois)
Lowest:	60	(Kansas City International, Missouri)
	90	(Washington Dulles International, Virginia)
	150	(Denver International, Colorado)
	210	(Orlando International, Florida)
	343	(Raleigh-Durham International, North Carolina)

Noise Complaints Per Month

Highest:	2,500 700 625 367 350	(Denver International Airport, Colorado) (Minneapolis-St. Paul International, Minnesota) (Detroit Metropolitan, Michigan) (Chicago O'Hare International, Illinois) (Seattle-Tacoma International, Washington)
Lowest:	1 1 5 10	(Houston Intercontinental, Texas) (Salt Lake City International, Utah) (Tampa International, Florida) (Albuquerque International, New Mexico) (Phoenix Sky Harbor International, Arizona)

▶ The number of noise complaints an airport receives can help assess the effect of airport noise on a community. However, these numbers can be misleading in some situations. For example, if an airport receives 300 complaints per month, 50 could be from one household.

► Noise complaints correspond to many factors, such as: loud single events of aircraft noise; time of year (for example, springtime usually brings more calls because people have their windows open), and changes in flight patterns, where people unaccustomed to noise are suddenly exposed. EPA's "seven factors" (see page 21) are useful in predicting the cause of aircraft noise complaints. At Tampa International Airport, for example, more calls come in early fall, when people may be turning off air conditioners and opening windows.

► Despite the relatively few people living within its 65 dB DNL noise contour, Denver International Airport had the highest number of noise complaints (2,500) per month. This supports NRDC's conclusions from the Westchester Airport study: that the threshold of 65 dB does not accurately reflect the impact of airport noise in a community. Denver is an example of where people unaccustomed to noise are suddenly affected.

.

Percentages of Stage 3 Flights

00 400% Charts 2. 40 -lasset

80-100% Stage 3: 10 airports:	San Jose International, CA (100%) Sar Jose International, CA (93%) Sacramento Metropolitan, CA (92%) San Diego International, CA (89%) Ontario International, CA (87%) John F. Kennedy International, NY (84%) Seattle-Tacoma International, WA (84%) Dałlas-Ft. Worth International, TX (83%) Los Angeles International, CA (83%) Metropolitan Oakland International, CA (81%)
40-60% Stage 3: 11 airports:	Honolulu International, HI (60%) New Orleans International, LA (57.5%) Raleigh-Durham International, NC (57.5%) Charlotte-Douglas International, NC (55%) Miami International, FL (54%) Baltimore-Washington International, MD (50%) Detroit Metropolitan, MI (50%) Fort Lauderdale International, FL (50%) William P. Hobby, TX (50%) Minneapolis-St. Paul International, MN (48%) Kansas City International, MO (44%)

▶ Preliminary FAA estimates indicate that the nation's major commercial air carriers had an average fleet mix of 70% Stage 3 in 1995. Our survey results show that Stage 3 aircraft are dispersed widely; for example, at least 10 of the nation's largest airports are below 60% Stage 3, on average. While the Stage 3 phase-in applies to airlines, some airports have been able to take steps to encourage their users to accelerate the phase-in. Seattle-Tacoma Airport, for example, has a "noise budget" that assures a faster phase-in of Stage 3. John Wayne airport has been 100% Stage 3 since 1985. Unfortunately, these restrictions have been much harder to implement since 1990 when the Airport Noise and Capacity Act (ANCA) was enacted. On the other end of the spectrum, Minneapolis-St. Paul Airport is only at 48% Stage 3; this is probably because Northwest Airlines, with one of the oldest fleets of all the major U.S. air carriers, uses Minneapolis-St. Paul as its "hub."

Part 150 Noise Mitigation Programs

Airports participating in the Part 150 Program: 34 Airports not planning to participate: 14

Airports planning to participate in the future: 2

Even though the Part 150 program has several drawbacks, most of the airports in our survey have decided to participate. Generally, an airport can expect to benefit from a Part 150 program, as it is then eligible for federal funds for noise mitigation measures. The airports that have elected not to participate in Part 150 do so for varying reasons; however, two obvious reasons are (1) so many people are affected by noise from the airport that it does not want to undertake the effort and (2) so few people are in the airport's 65 dB DNL that it would not be worth the effort. LaGuardia and Miami airports, with the highest populations within the 65 dB DNL, may be examples of the former; Westchester County Airport, with only about 15 residences within the 65 dB DNL and has decided not to participate in a Part 150 program, is an example of the latter.

Noise Exposure Maps

▶ Part 150 recommends that noise exposure maps be updated every five years or when a change in operations causes an increase in the DNL of 1.5 dB or greater. Our survey elicited a wide range of responses to the question about the airport's most recent noise map and when the map will be updated. Many airports have maps drawn in order to receive funding for soundproofing of schools and churches, which is available to airports even if they are not participating in the Part 150 program. Some airports may be hesitant to update their maps. As the 65 dB DNL noise contours shrink due to the introduction of Stage 3 aircraft, there may be more pressure for residential development in those areas, which will still be affected by airport noise. California requires airports to draw noise exposure maps quarterly in accordance with State Law Title 21.

Curfews and Other Noise Restrictions

Seven airports in our survey had mandatory flight curfews in place: Boston Logan International (MA), John Wayne Airport (CA), Washington National (VA), San Diego (CA), San Francisco (CA), San Jose International (CA), and Seattle-Tacoma (WA). Two of these airports, John Wayne and Washington National, have curfews on Stage 3 aircraft at night — these are probably the most proactive noise programs of any in the country. These curfews may be a result of community pressure. The other five airports have curfews on Stage 2 aircraft during night-time operations.

► Virtually every airport in our survey has some noise restriction in place. Many have limits on engine "run-ups" during night-time hours. Run-ups sound like the "revving" of an engine. They are required for engine maintenance, but they do not necessarily have to occur at night. Airports also often have guidelines for "preferential runway use," which details how planes may takeoff or land over areas with the fewest residences.

► One interesting finding of our survey is that California seems to be more aggressive on aircraft noise issues than many other states. Seven of the top 10 airports in terms of percentages of Stage 3 are all in California and of the seven airports with flight curfews, three are in California. Also, California does not use DNL but CNEL, a more comprehensive noise measurement. Finally, California requires airports to submit noise exposure maps quarterly to the state's Division of Aeronautics in accordance with State Law Title 21. Enacted in 1972, this law requires that airports with "noiseimpacted areas" (areas within the 65 dB CNEL) develop a noise mitigation plan. If the airport chooses, it can participate in Part 150 to satisfy this requirement.⁶²

Expansion Plans

Airports in the process of expanding or planning for expansion: 32

Airports considering expansion: 2 Airports not planning to expand: 5 Unknown: 11

• Our survey results support what many airport neighborhoods fear: that the aviation industry expects current growth trends to continue and that most airports are pursuing plans for expansion. Our survey results support what many airport neighborhoods fear: that the aviation industry expects current growth trends to continue.

GROUND-LEVEL AIR EMISSIONS

The issue of noise tends to dominate debates over airport pollution, often to the exclusion of another important topic: ground-level ozone, the primary component of smog. Smog is normally associated with motor vehicles (perhaps the single largest threat to local air quality) and industrial sources such as factories and incinerators. However, air pollution totals from automobiles and many. major industries have stabilized or decreased with time while aircraft continue to emit more and more ground-level ozone precursors — volatile organic compounds (VOCs) and nitrogen oxides (NO_x)— with each passing year. Airplanes produced 350 million pounds of these pollutants during their landing and takeoff cycles (LTOs)⁶³ at United States airports during 1993, more than





Į.

Exhibit 5

DECLARATION OF CHRIS REYNOLDS

I, Chris Reynolds, make the following declaration based upon my personal knowledge:

 I was initially trained as an Air Traffic Controller by the Air Force in 1978 and was stationed at Bergstrom AFB from 1978-1981. I was then reassigned to Sheppard AFB for a short time in 1981 before being reassigned to San Francisco, California air traffic controller for 13 months after the ATC strike in 1981.

 I finished my Air Force career in San Francisco and was hired by the Federal Aviation Administration as a civilian at the same facility for the same controller position. I worked in San Francisco from 1982-1985.

 In 1985, I accepted a position in Tucson, Arizona to work both a tower position at Tucson International Airport ("TIA") and in the approach control facility at Davis-Monthan Air Force Base ("DMAFB").

 In about 1990, I began working exclusively at the approach control facility (RAPCON) at DMAFB and concluded my career as an Air Traffic Controller there in 2007 when I retired.

 During my time at DFAFB, I worked on several committees involved with procedures and letters of agreement between the RAPCON and DMAFB tower as well as Tucson tower.

6. I have reviewed portions of the Draft Environmental Assessment for the Proposed Up[date and Implementation of the National Guard Bureau Training Plan 60-1 in Support of Operation Snowbird Davis-Monthan Air Force Base, Arizona ("EA").

 In several places in the EA, the Air Force represents that in an effort to abate the noise over residential areas. "departures would use Runway 12 and arrivals would use Runway
30. to the extent practicable." See, e.g. EA 2-9. The Air Force states that, "[t]his action would concentrate the majority of the air traffic noise southeast of DMAFB and away from the majority of the population near downtown Tucson." *Id.*

8. Based upon my experience as an Air Traffic Controller, it is my opinion that such a configuration would almost never be "practicable." Because of the standard operating protocols at the Tucson TRACON, the opportunity for OSB planes to depart on Runway 12 and return on Runway 30 would be severely limited and almost exclusively limited nighttime flights, which would rarely occur. During the day, when the vast majority of the sorties would take place, both departures and landings would be required to use Runway 12 or Runway 30, depending on wind. Runway 30 departures would obviously depart northwest bound over the city.

9. In the EA, the Air Force also states that "[e]very visting unit would receive the OSB briefing (known as the Local Area Brief) regarding noise abatement requirements and procedures for flights over urban areas." EA 2-9.

10. It was my experience with OSB pilots, however, that even after these local area briefings, there was an initial adjustment period at the beginning of each training week where pilot errors were much more prevalent. For example, a occasional error made by visiting pilots was the mistake to turn immediately after take off and not fly a straight-out course as required, often risking an in-air collision with another recently departed aircraft traveling on a parallel departure route off of TUS.

 Another repeated problem area were recoveries instructed to fly the Davis recovery, erroneously flying off the radials of DM tacan and not Tus Vortac.

Also prevalent were aircraft descending earlier than instructed on this recovery.

These mistakes provided a greater potential for loss of separation particularly

2

closer in to the Tucson airport where due to the already close proximity of the airports, strict adherence to procedures and instructions are needed.

14. Collisions have, fortunately, been avoided in the past because of the vigilance of the TRACON air traffic controllers, but it was a recurring problem that, in my opinion, will only be exacerbated by an expansion of the program.

I have made the foregoing Declaration this 14th day of September, 2012 in Tucson, Arizona upon my oath and under penalty of perjury.

Uterne

Chris Reynolds

Exhibit 6

Concept of Operations **Operation Snowhird**

considered an austere breation to which units deploy and perform Operation Snowbird is a complete deployment

What we provide:

bunding range is will network access. moms, and helpede you lue up offer factions and infrastructure to have a From solung up the Live Ordio are the periodness parts p isonal ar planning done better you get li re Londing Area (LULA), arepare We provide you with the to getting you art his with domihere reded you establish at some onthe to warm with urvat deployment

of equipment you may need, but not a Finatic flightline we have many types number of computers for foreign use. Aboved the editect have competerlin of it. For specifics on equipment concept of a bare have cuvingument. ane out of equipment, based on the SIFRNET We only have a limited manues 1.55AMS, CAMS, and We provide a minimum please (What you provide: that are connected to the Day is donta bravenus AVL malacette

depters in all, we don't accomplisival. your would arrangely deploy with to You brine all the tools that mulail the nice to have equipment that top computies, specially at ancealt, personnel (Sumwhind any generic location to inclunersonnel just assert vour equipment, etc.)

What we have to offer

20 vars and trucks available for unit -12 of those are covered officerall -20 permanent party personnel 38 aircraft packing spots -12 Arres of runip starte What we have: parking

(62°4FW/ANG, and the 56% RMIO, but ulso from the 355th WG and all of Davis-22560 Sq Ft of office and maintenance -Unquestioned support of not only the 25 officer quarters thru base lodging -25484 Sq Pt. 121 person dorm space available Monthan AFB

12 spot live load area. 12 Air to Air Ranges We have access for APAC Ranges

Units available to help with training **Multiple Marine avoidion wuits** 2 Helicopter units 12 1-16 mm--3 A-10 units include:

MIN-82/84, Mayericks, CBUI, JDAM. Precision guided wenpoes, and nomy Types of training available include: Live Drop to include: NV G Qualification. Turgeting Pod-DACT (SAR others

Dperation Snowbird



providing access to the The worlds best team worlds best training



SIDL 1000 18

Why Operation Snowbird?

meaning to the Barry M. Goldwater Kamy worlde be a bundbilly supple that also had he dewith the strip constrainty to an Alaxana's drawners spreasurers that and be considered useld over which include put out NVT, the ration Shawbirds module be of its pad qualifications, CSAR and UAE U fournet. worlds prender of to ale rounal groot previous necessary of malvary of the The allows in traffer automotively at Musels, MK 82 and 84 not 60 and review anded weaping.

he 1622 PWC 155 WCL and Un 569 33MO which helps its get higher printing in both w Snewbird are external association of the Dee to agreements that we we summed with he muts that we host here a filerant invaried the ran would thepace times requested.

Operation Snowburd hus die bachties and knew how to familie alread any plath way firm holicopters to frence and of al-40 VP and configurations

handling the numpri needs of an mote, both turburn and deniestive and we're felsen denner a have a straid room property which Who and



Opportunities for Site Seeing and Recreation

Caverns, Colossal Cave, the city of Old Tucson Studios, The Pinna Air Canyon. Within a few hours drive Lucson, AZ. Within the city there are many opportunities to site see. we have the city of Phoenix (host gateway to Mexico). Less then a Canyon, Las Vegas Nevada, and and Space Museum, and Sabino to the Anzona Candinals and the Monument, the Desert Museum. to include the Saguaro National days drive away are the Grand Corral), and Nogales Arizona **Operation Snowhild is** located in the beautiful cuy of Tombyione (home of the OK Diamond Backs), Crochner San Diego California Five those interested in more of a work cut we have many areas that allow for both road and neomrain biking, and a number of local companies that will take you out into the desert 4x4mg, and seeure the steptis. Tueson is also horne to over 25 Golf consees, many of which hors mational events such as the Rob Hore Cheveler Classic, and the Lueson Open.

Facilities Available in the Snowbird Campus

The Snowbird campus is fully enclosed within a brief, with, this is to provide for the safety and security of our puest units and to provide for privacy, so that personnel can concentrate ou the imperion at hand.



Building 1707 A fully function of vehicle in thierdove and ACIE facility.



Ruilding 1709 This houses our permanent parts ch il empluer congretationgent, and our power wash how



Railling 1711 Contains affaces for the munitions toops and storage bays for the units.



Building 1712 Has offices and break norms for all your maintenance personnel. This facility also has a fully-coverd parto and Rabyne area where your and carl cool investor protectae.



Building 1714 fuss is our new -4 building: contamned his onprore, mission planuing, cynfrerence nownclass rooms, and offices for command personnel.



The Parking Ramp The Snowbird putking caring an fast 12 row cred parting spore for the configuration strunmaintenance personnel and another.

Train like we fight; Fight like we train If yon 'd like to accept the opportunity to come train with us, all you need to do is contact us and we'll get the oull rolling so you can get the bombs dropping. Our domestic units can see our web site at: https://dox.ang.af.mi/XOD010me/ Fighter/Snowbird/Snowbird.htm All units can contact us through our email at: 162LNG/scheduling@du.af.mil

By phone at:

II DSN Capable 228-7174 or 228-7153

K)N

f connercial line at (\$20)228-7174 or (\$20)228-7153 To Whom it May Concern:

September 13, 2012

I am entering my comment on the Operation Snowbird (OSB) Expansion Proposal. As a long time Tucson resident and homeowner near the DM flightpath, I have serious concerns about Environmental Assessment (EA) for the OSB. The EA has numerous flaws.

Foremost is the absence of evidence that fully supports the EA assertion that the OSB Expansion would have no significant impact on Tucson. The EA contains much language that is inconclusive.

Furthermore, noise impact should be measured Single Exposure Levels (SEL) not noise averaging (DNL). For real people on the ground averages mean very little, but excessive SEL incidents have profound impact on quality of life, psychological comfort levels and can damage hearing. Also, noise data on which the finding of "no significant impact" (FONSI) is inadequate for predicting actual noise impacts. There are major inconsistencies and omissions in the EA noise modeling that must be addressed for an accurate assessment.

Also, the EA does not provide a thorough evaluation of the negative impact on Tucson's tourist industry. Instead, faulty logic not based in thorough analysis leads to the EA conclusion of "negligible adverse effects on tourism."

And, the EA defies logic when it concludes that the OSB Expansion would be imperceptible to proximate neighborhoods already known to be suffering from a violation of the Environmental Justice Regulations. Clearly to anyone using common sense, a doubling of SBO Sorties and the addition of night flights would not only be "perceptible" but have tremendous negative impact.

Also, EA statements about Runway 12 and Runway 30 are vague and misleading. Clarity is badly needed here.

Finally, the EA does not address the true, viable alternatives to the OSB program. It is essential that alternatives be fully considered as part of a thorough assessment of any proposed OSB Expansion.

Therefore, I do not support and, in fact, I strongly oppose the OSB Expansion Program. What is needed is a thorough Environmental Impact Statement (EIS) that is based on accurate, verifiable, significant and truly pertinent data. The EA is an inadequate document that lacks sorely in substantiation. A thorough EIS is what is needed rather than the EA that has been done. The citizens of Tucson have a right to the kind of evaluation of the proposed OSB Expansion that an EIS will provide. The importance of the lasting impacts of any OSB Expansion on Tucson and it's citizens warrants a full EIS.

Thank you for your kind consideration in this matter. Sincerely, Albert Marsh September 13th, 2012 a<u>lbertmarsh@msn.com</u> 707 E. 1st St., Tucson, AZ, 85719 DATE: 10-3-12

ATTN: OSB EA COMMENT SUBMITTAL 355th Fighter Wing Public Affairs 3180 S. First Street Davis-Monthan AFB, AZ 85707

Dear Sirs:

I am sending you my comment regarding the Draft Environmental Assessment on Operation Snow Bird, which was released on July 31, 2012. The conclusion of your draft is a Finding of No Significant Impact. I will attach my personal impacted experiences at the end of this letter.

The draft is extremely long, and almost impossible to understand everything in it. But since we live close to the DM AFB runway, we are very affected, even now, which we see that you admit. Yet you say there will be no significant impact, even if you double the flights and add night flights. I strongly disagree with this finding.

I will site a few things for your consideration:

1. We definitely have an Environmental Justice problem in this area. You state in your cover letter lines 47-49: "There would be no additional disproportionately high and adverse impacts on minority and low-income populations near DMAFB compared to those impacts associated with No Action Alternative." If you change nothing, we are still impacted and will continue to be more impacted because you keep bringing in more loud and more dangerous aircraft right over us without our permission and with no regard to our safety and wellbeing. And if you bring in more aircraft, or double the aircraft and add night flights, we will actually be extremely, significantly impacted.

2. Your EA does not investigate reasonable alternatives for basing the OSB elsewhere, even though in an EA you may not be required to do that; therefore an EIS is needed to thoroughly investigate other possible locations in less encroached areas, and to give a better report on the actual aircraft you desire, which you have left out many in this EA, and provide true noise levels, not computerized models of noise levels.

3. Your EA has very misleading and even false information in it. You do not state the effects on the actual neighborhoods closest to DMAFB, and mid-town Tucson. You chose to talk more about the southeast end of the runway, which is not encroached, and you talk about downtown Tucson, who is not in the flight path. The most impacted people are in the flight path, and accidental potential zones, and the circling of planes all over Tucson.

4. Your EA talks about adding night flights. You already fly late at night, early in the morning right after midnight, and even early in the waking hours. And this is only night time, daytime is even worse. You want to add night flights saying that it won't bother people because "human activity may be more relaxed." (Quoting pages 3-2, line 5 & 6). Most people are sleeping, and the planes that are so loud, wake us up and frighten us, and other people work at night and will also be affected.

There are numerous things to be said about the inadequacy of this EA report. A TRUE EIS is required and requested.

I request a copy of your final decision on this EA, please send it to me at my mailing address, or at least by e-mail.

Thank you for your time, and now I will attach separately my own personal experiences proving to you that I am impacted by the DMAFB aircraft even now, and continue to be and will continue if you add any number of aircraft.

Sincerely, alou & Romero Jr.

Printed Name: Address:

Alex S. Romero Jr. 3837 E. Technical De. #5 E-Mail Address: Tuchon, AZ. 8.5713

These are my personal comments attached to the letter:

I agree with everything that has been stated in this petition, and aside from the unbearable noise it creater - the only function for the air-craftic to Kill and cleatry - you should be ashared of yourselves . alex stomest

3837 E. Technical DR. #5 Tucson, Az 85713

10-3-12

Anita W. Scales 2734 East Malvern Street Tucson, AZ 85716

e-mail (porcine@mindspring.com)

September 11, 2012

Attn: OSB EA Comment Submittal 355th Fighter Wing Public Affairs 3180 S. First Street Davis-Monthan AFB, AZ 85707

Sirs.

The scoping meetings for Operation Snowbird show that there is no overwhelming support of an expansion of this mission. Now, we have been presented with a draft environmental assessment that is incomplete, uses data from an alleged 2007 Noise Study, which cannot be viewed by the public, and draws unsubstantiated conclusions. This E.A. is written in language that most people find incomprehensible. The Air Force tactics are both specious and misleading.

It is disappointing that ordinary, hard-working citizens of this town are witnessing such sleightof-hand techniques to validate a myth that more frequent ear-busting noises above our heads will not impact our lives.

We deserve a complete and honest environmental impact statement

Sincerely your lealer Anita W. Scales

9/7/12

Anne Gomez 3455 E. Via Esperanza Tucson, AZ 85716

goanne@cox.net

(520) 297-1758

Please send me a copy of the Final Operation Snowbird EA. Thank you.

WHY AN EIS IS NEEDED FOR THE OSB EXPANSION PROPOSAL

1. NO REASONABLE BASING ALTERNATIVES

There are no reasonable basing alternatives included in the OSB Draft EA. Thousands of local citizens sent letters and petitions to Washington expressing concern about the noise and safety of the new aircraft that was introduced into the Operation Snowbird program. A delay of training is not a rational argument. Operation Snowbird operated out of TIA while the runway at DM was being resurfaced. Other temporary arrangements can be made. There is no effort demonstrated to locate other suitable locations in less encroached areas while several other options exist. The cost factor is rightly not mentioned in the Draft EA especially in light of the billions being spent on the F-35.

2. THIS IS A CONTROVERSIAL ISSUE WITH A HIGH PUBLIC TURN-OUT AT THE SCOPING MEETING TO NW OF DM

This is an important and controversial issue which is given short shrift in the OSB DEA. There are no public meetings yet much of what was presented during the scoping period has changed...i.e. 1.) The baseline was changed from 2002 to 2009 2.) A new 2007 noise study and new noise contours were introduced. 3.) There is now discussion of Runways 12 and 30 which is not understandable. 4.) There is now mention of a low-income minority area subject to disproportionate noise impact.

There was a high public turn-out at the scoping meetings in the densely-populated mid-town area (Crowd opposes expansion of Snowbird <u>http://azstarnet.com/news/local/crowd-opposes-expansion-of-snowbird/article_c266a455-4982-5b1d-b66b-e6dc4218c2e1.html</u> Arizona Daily Star, September 28, 2011) and a low turn-out at the meeting in the SE area indicating a lesser impact on humans in that area. The document indicates incorrectly that the majority of the noise is to the SE. (See more 7. MISLEADING INFORMATION).

There has been insufficient effort to reach out for community involvement. No notices were sent to the population that already is disproportionately impacted by aircraft noise. This was incorrectly stated in the draft document. Initially, it was indicated that E-mail comments would not be accepted making it difficult for many who are out-of-town at this time of year. This was especially the case for those who are out of the country. E-mail comments were accepted during the OSB scoping period and also for the recent F-35 EIS. They should have clearly been accepted for the draft OSB EA.

3. THE OSB DRAFT EA IS TOO TECHNICAL AND FILLED WITH JARGON AND ACRONYMS

There is need for a plain English EIS. The DEA uses jargon and acronyms that are not easily understood by the general public. Example: P. ES-1 "NGB is preparing to update its TP 60-1, including the RMP, which would address the NGB's proposed management of OSB at DMAFB." One shouldn't have to go back and forth to a list of acronyms to read the document. The general public also doesn't understand that Runway 12 and Runway 30 is really one runway and that 12 and 30 refer to compass directions. The document leaves out the important circular flight path over the City, making it difficult for civilians to understand the impact of the flights on the community.

4. A FONSI IS ACHIEVED USING SUBJECTIVE AND INCORRECT DATA

The FONSI summary is subjective with little data to back it up. A more thorough analysis is needed.

5. THE PUBLIC WAS TAKEN BY SURPRISE BY AN UNSUBSTANIATED 2007 NOISE STUDY

The 2007 OSB Noise Study was never mentioned during the scoping meetings. It seems to coincide with the release of a new AICUZ. The 2007 Noise Study was never vetted by the public nor was it mentioned in a press release or at a MCRC meeting. When asked for a copy of the 2007 Noise Study, several members of the public were told by the DM Public Affairs Office that it was an "Internal document not available to the public at this time." There is little information on how the noise data was collected or why certain aircraft were selected or omitted. Also, there is no mention of onsite noise data collection. We assume that there was none. An EIS using more precise onsite noise data needs to be done. After the claim that OSB aircraft were analyzed in the 2002 CSAR EA yet never mentioned in the document, there is some skepticism among the public about the 2007 Noise Study.

6. THE NOISE DATA NOT ONLY OMITS SOME OF THE LOUDEST AIRCRAFT, BUT THE DATA IS WATERED DOWN BY AVERAGING (DNL).

The true impact of noise is better measured by Sound Exposure Level (SEL), which is a single event which can produce the "startle" reaction that is briefly mentioned on page 4-1, L32-34. The statement "the average of the events (i.e., DNL) still represents the most accurate assessment of the conditions." is never substantiated. It is an opinion not backed up by research data or health studies. The noise level of a single F-22 passing over at 500' above ground level (i.e. the level of the Julia Keen Neighborhood) can reach 120 dB. On P 3-1, L30, the DEA states that the threshold of pain is also around 120 dB. It appears that the loudest OSB aircraft have been omitted from the 2007 Noise study. The SEL single event would be more significant than DNL when doing a study on human health effects on minority low-income populations as required by Executive Order 12898.

7. THE AF NOISE MODELING PROGRAM BASEOPS FAILS TO GIVE A TRUE PICTURE OF THE NOISE EFFECT

Page 4-1 of the DEA mentions the AF BASEOPS noise modeling program that was used to come up with the noise contours that contribute to a false conclusion that doubling the number of OSB flights and allowing night flights would result in only a slight increase in the number of impacted homes and multi-family buildings. This conclusion defies common sense.

A false assumption was made on P. 4-1, line 23-24 that F-16C and F-15A aircraft were suitable substitutes for additional OSB aircraft. Therefore, the AF simply left out the louder F-22s, F-18s, and the Harriers. The attached AF Edwards F-35 Noise Test Data shows at 1,000' that the F-16 C (PW229) at Min Power to be 89 dB while the F-18C/D to be 95 dB, 6 dB louder. Each 10 dB doubles the perceived noise. The attached graph shows the F-15A at the same altitude to be 91 dB and the F-22 to be 102 dB. The F-22 is more than twice as loud as the F-15A used in the modeling. The F-22 is well over twice as loud as the F-16. Along with the watered-down DNL, leaving out the loudest OSB aircraft results in inaccurate noise contours that ultimately result in a false conclusion that there is only a slight increased impact on the residents. An information sheet distributed by DM to the MCRC (attached) shows the Marine Harrier AV 8B (84.0% RPM) at 500' to be almost 113 dB, four times as loud as the F-16C. at 1,000'. There can be variances in noise measurements, but omitting the loudest OSB aircraft demonstrates that clearly a more careful analysis and computer modeling of OSB noise need to be done. It appears that most of the foreign aircraft, the osprey, and the helicopters have been omitted from the noise modeling that produced the noise contours.

Also, the noise modeling fails to address the impact of the two circular flight paths over the city and assumes a straight-in approach. This is not the case. In addition to the larger circular flight path over the city, there is also the "racetrack" pattern done prior to landing over neighborhoods to northwest of DM. This is not taken into consideration.

The noise contours in the DEA are considerably smaller than those in the Airport Environs Zone (AEZ) adopted by the City of Tucson in 2004. These noise contours were based on hypothetical 5-squadrons of F-16s. The diminished size of the DEA noise contours is likely due to the absence of data for many of the louder OSB aircraft.

8. MISLEADING INFORMATION

On P. 4-16, Lines 27-30 "1. Airfield departures and arrivals, to the maximum extent possible and consistent with established safety procedures, use air space southeast of the base. 2. Traffic patterns are flown to minimize overflights of populated areas. 3. Operational areas for aircraft are over very sparsely

populated areas. (There needs to be a definition of "Operational areas".) These statements are blandly misleading and simply not true. The number of take-offs toward the less encroached area SE of base is about equal to the number of landing over the densely-populated area NW of the base. There is no mention in the document of the circular landing pattern over the City of Tucson. After circling over the City, the OSB aircraft descend to approximately 2,000'over the Broadmoor Neighborhood, then to approximately 1,500' over hundreds of home in the Arroyo Chico Neighborhood, descending to approximately 1,000' over Reid Park and finally coming in over the Julia Keen Neighborhood at about 500'. These are all densely-populated residential areas. The Julia Keen Elementary was closed in 2004 due to low-flying Davis-Monthan aircraft. This neighborhood is indicated in Table 2-4 on page 2-13 to be a minority, low-income population that is disproportionately impacted by military aircraft noise. The question remains as to when this neighborhood was first designated under Executive Order 12898 of February 16, 1994- Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations? Is mitigation required?

When discussing the impact of noise, the DEA fails to explain the meaning of Runway 12 and Runway 30. The EA doesn't make it clear that this is a single runway and that 12 and 30 refer to compass directions.

Aircraft **can take** off to the SE on Runway 12, but they can also **land** on Runway 12 after circling over the urban neighborhoods. This is the common practice. Runway 30 doesn't equate only to the area SE of the base. It is a compass direction. The EA fails to explain this.

Page ES-2, Lines 18-21 states: "To further abate noise, departures would use Runway 12 and arrivals would use Runway 30 to the extent practicable, particularly during the few nighttime operations. This action would concentrate the majority of the air traffic noise southeast of DMAFB and away from the majority of the population near downtown Tucson." This statement is misleading and does not reflect the ongoing practices. Not only is this statement false, but the procedure outlined may well be unsafe. 98% of the landings are over the area to northwest of D-M.

There is no map in the DEA document which accurately shows the circular "racetrack" pattern which is done shortly before landing over the NW area. The poster displayed during the scoping meetings showed this circular "racetrack" pattern to be located within the boundaries of the base. This is incorrect. The "racetrack" landing pattern is made over the Julia Keen Neighborhood by most OSB aircraft.

The 1989 EA for Realignment of Forces at Davis-Monthan Air Force Base, Arizona clearly states on page 9 in it conclusions and recommendations that the major concern is the area to northwest of D-M and that encroachment is nearing a critical stage. The OSB DEA incorrectly makes it appear that the majority of the noise and safety concern it to the southeast of D-M. This is not true. Also, this area is far less encroached.

Source: 1989 EA for the Realignment of Forces at Davis-Monthan Air Force Base

"o An analysis of existing and proposed land uses within the Davis-Monthan AICUZ indicates that **the primary concern is with existing land uses off the northwest end of the runway** and the future land uses surrounding the other boundaries of the base, primarily the southeast."

"o There is significant impact upon the City of Tucson from Davis-Monthan AFB operations. Encroachment of Davis-Monthan AFB is nearing a critical stage; however, in order to insure the public health, safety, peace, comfort, convenience, and general welfare within the airfield environs, and to prevent the impairment of the airfield, it is necessary to guide, control, and regulate future growth and development.

9. THE EA ATTEMPTS TO MINIMIZE THE IMPACT THROUGH WORDS

The DEA systematically makes an effort to minimize the impact of doubling OSB flights and adding night flights, by repeated use of words that tend to make the reader believe that there will not be a significant negative impact on the human environment...i.e." Insignificant impact", "imperceptible to the residents", "no significant impacts", "No long-term adverse effects", "slight change", "not measurably increased", "extremely low", "no additional disproportionately high and adverse impacts on minority and low-income populations", "small numbers". When talking about doubling the number of flights of the loudest aircraft and adding night flights, a finding of no significant impact obviously doesn't make sense. The DEA for Operation Snowbird is not a serious document designed to meet NEPA requirements, but a "sales job".

10. ENVIRONMENTAL JUSTICE

Cover Letter, lines 47-49 "There would be no additional disproportionately high and adverse impacts on minority and low-income populations near DMAFB compared to those impacts associated with No Action Alternative." Table 2-4 on page 2-13 does identify a minority low-income area that is disproportionately impacted under the OSB "No Action Alternative" and yet it somehow concludes that doubling the number of OSB sorties and adding night flights "would likely be imperceptible to residents." This doesn't make sense, ES-3-ES-4 "These expansions in the noise contours would be imperceptible to the residents as the changes in contours would be less than 50 feet. Public safety risks would not be measurably increased under any of the alternatives." These conclusions are based on incomplete data used in the noise study and in noise modeling. Common sense tells us that you can't double the number flights introducing night flights and have no significant impact on the quality of life and safety of the residents in an area already identified in violation of Environmental Justice Regulations. While acknowledging that an area is an Environmental Justice concern, there is no mention of need for mitigation.

Under the Environmental Justice section on page 3-19, there is little information about Census Tract 20 and 21 which includes the minority neighborhoods that are in

the high noise zone for OSB. The EA used the less affluent City of Tucson as their Community of Comparison (COC) rather than Pima County that was used in the F-35 EIS. Using the City of Tucson as the COC would exclude comparison to more affluent areas i.e., the Catalina Foothills and Oro Valley.

The recent F-35 EIS for TIA used the number of residents disproportionately negatively impacted in a low-income area, not the number of structures. This DEA never mentions the number of people impacted, but only the number of homes, multi-family buildings and other buildings. There are many coop buildings in the Julia Keen Neighborhood with hundreds of residents. The EA is tasked to evaluate the impact on humans.

The purpose of Executive Order 12898 is to focus federal attention on the environmental and human health effects of federal actions on minority and lowincome populations with the goal of achieving environmental protection for all communities. Yet there were no notices mailed to the residents of the low-income minority area that is already negatively impacted by noise from D-M overflights. There were no materials or notices in the Spanish language provided, although they were requested. An EIS needs to be done with appropriate materials in Spanish along with a careful study that evaluates the environmental and health effects of the aircraft on this area.

Table 4-8 on page 4-14 clearly shows that there is a disproportionate impact on lowincome and minority populations. Why aren't there any means for mitigation mentioned?

http://www.epa.gov/lawsregs/laws/eo12898.html

Summary Executive Order 12898 - Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations.

11. LACK OF ANALYSIS OF THE ECONOMIC IMPACT ON TOURISM, ONE OF TUCSON'S MAJOR INDUSTRIES

The Draft OSB EA states on Page 3-13 that tourism is a major industry in Tucson, "Tourism is a major industry in the region. According to the Metropolitan Tucson Convention and Visitors Bureau, in 2010, tourism accounted for approximately 21,500 jobs in Pima County. The County has approximately four million domestic overnight visitors per year (2006). Visitors account for more than \$2 billion in direct travel spending and generate more than \$124 million in direct tax receipts annually (2010)."

Strangely, after making this statement the DEA states on page 4-10 "Concerns about the impacts of an expansion of OSB activity on the tourism industry were expressed by citizens at public meetings and in written comments. Anecdotal information presented cites noise as causing an adverse impact on tourism-industry businesses.

However, any adverse impacts on tourism in the region would be the result of all DMAFB-related activity, not just OSB, and they would be difficult to quantify. The Proposed Action makes only minor changes in the number of homes and businesses within the 65 dBA noise contour, and most of the business areas are light industrial. Consequently, the Proposed Action would have negligible adverse impacts on tourism."

The economic impact on tourism, one of Tucson's major industries, needs to be done in an EIS. It can't simply be said that it is too difficult to separate OSB from other DM overflights and not address the negative economic impact of the loudest aircraft. The 65 dB noise contour mentioned relates to residential use, not to whether a tourist sitting by the pool will want to return to Tucson for another visit. The DEA fails to address the impact on hotels that are in the circular return path to D-M,

12. CUMULATIVE IMPACTS

This section of the DEA is sorely lacking and premature. Although the initial assignment of the F-35 has been made to Luke AFB, a secondary beddown in December, 2014 is still to be decided. The F-35 EIS stated that the D-M flight path would be used from time-to-time, if TIA were named. Also, the F-35 EIS mentioned that live ordnance would be loaded at D-M. The EA does mention "Cumulative effects on the noise contours surrounding DMAFB and TIA could occur if the F-35A beddown occurs at TIA"

The EA fails to mention the railroad tracks located near the neighborhoods that received the highest DM noise impact. There has been mention in the press of possible expansion of the rails through Tucson. In light of the cumulative impact, an EIS needs to research the amount of noise from the trains and future railroad expansion in the area near the disproportionately impacted area

The DEA fails to mention events such as the Heritage Flight Conference that was held at D-M in March or the bi-annual Air Show/Open House that was held at D-M in April. One of the Air Show participants broke the sound barrier while practicing causing damage to several businesses and homes. These properties were not located in the high noise zone mentioned in the DEA, but in the area of the circular flight path over Mid-town Tucson. Also, DM hosted the Hawgsmoke Competition in August. The competition was held at the B. G. Range, but they came thundering back to Davis-Monthan over the neighborhoods.

Although at high altitudes, the DEA fails to mention the commercial air traffic over the City.

In the Cumulative Impacts section of the DEA on page 5-2, Line 40, it is claimed that OSB aircraft were evaluated in the 2002 CSAR EA even though there is no mention of either the Operation Snowbird program or their aircraft.

13. PROPERTY VALUE

The methodology used regarding loss of property value due to D-M military overflights is too general and doesn't use accepted methods of evaluation. On Page FONSI-2 of the OSB DEA states "Property values near DMAFB have not experienced decreases as dramatic as those of other properties in the outlying portions of the City of Tucson or Pima County, suggesting that existing aircraft operations have not decreased property values compared to other properties in the local area." This is in contrast to the January 1, 2012 article in the Arizona Daily Star that states "The largest a number of houses sold under \$100K are found on the south side, surrounding Davis-Monthan AFB and near the Tohono O'odham Nation." <u>http://azstarnet.com/real-estate/in-homes-here-sell-for-under-k/article_f957345a-a856-56bc-aa1e-46f8f27c3f29.html</u>

The accepted method of evaluation of property value by both appraisers and assessors is to use the sales prices of comparable or similar properties. This methodology was used in 1994 Federal Aviation Administration study by consultant Booz-Allen & Hamilton. Similar properties (similar age, similar sq. footage, similar condition, etc.) were compared. The major difference being their location in a "quiet" neighborhood vs. a "noisy" neighborhood with airplane over flights. They demonstrated that in moderately priced neighborhoods in the vicinity of Los Angeles International Airport, noise diminished property values by 18.6%, or by 1.33% per decibel. A separate analysis, prepared for the Orange County Board of Supervisors, showed the diminution of property value averaged 27 .4% in the vicinity of the three California airports that were studied.

The Draft EA uses too wide a comparison of properties with Census Tracts vs. properties in Pima County. There is no back-up data on loss of property values. A thorough analysis of property and tax loss needs to be done in an EIS.

14. THE OSB EA BASELINE NEEDS TO REFLECT THE DATE OF CHANGE OF THE PROGRAM TO YEAR-ROUND COMBAT TRAINING FOR SISTER-SERVICES AND FOREIGN PILOTS

There was a significant change in the 1990's in the OSB program which impacted the human environment of the community surrounding Davis-Monthan AFB. Operation Snowbird changed from an ANG wintertime proficiency training program to a year-round combat training program for sister-service and foreign pilots. There was a major change in the type of aircraft that flew over the neighborhoods and the duration of the program. It became almost a quasi-commercial program (see attached brochure) that changed from mainly F16s and A-10s to include all types of aircraft....Harriers, Tornados, F-18s, F-15s, Osprey. When this major change took place there should have been an EA or EIS done to meet NEPA requirements.

15. THE POSITIVE ECONOMIC IMPACT OF OPERATION SNOWBIRD ON THE COMMUNITY IS MINIMAL

The positive economic impact of Operation Snowbird on the Tucson community is quite small in comparison to other influences i. e. tourism which could be jeopardized. During a MCRC meeting, the OSB economic impact was estimated to be less than \$300,000 annually. Neither the DM nor the 162nd Public Affairs Office was able to supply more exact figures. The Operation Snowbird campus was significantly expanded in 2000 to include living quarters therefore use of local hotels and motels is infrequent. DMAFB provides on-base food service, commissary, banking and recreational facility, etc. The EA mentions participants renting cars and eating out at local restaurants as a positive economic impact on P. 4-10. "These additional trainees would eat at area restaurants, rent cars, and in some cases may stay in hotels." This would unlikely be a significant economic impact on Tucson.

16. EXPANSION OF OSB WILL INCREASE THE RISK OF AN ACCIDENT IN A DENSELY-POPULATED AREA

It is obvious that doubling the number of OSB flights and adding night flights will also double the risk of an accident in a densely-populated area. The Table 3-10. Risk Factors for OSB Aircraft on P. 3-22 fails to include three of the OSB aircraft with the worst safety records: the F-18s, the F-22s, and the osprey

The EA fails to mention the December 2008 crash of an F-18 into a house in San Diego killing four on the ground. The pilot ejected safely. This aircraft was from Miramar MCAS, CA. Miramar's F-18s have participated in Operation Snowbird in the past. Another Miramar F-18 recently crashed at NAS Fallon.

Also, there is no mention of the recent crash of an F-18 into an apartment complex in Virginia Beach, Va. Despite extensive damage to the buildings and some injury to those on the ground, miraculously, there were no fatalities. The two pilots parachuted safely to the ground.

In 2000, an Osprey crashed in Marana killing 19 marines. MV-22 Osprey is listed as participant in the OSB Proposed Action on page ES-2.

In 2005, a Harrier from MCAS Yuma crashed into a City of Yuma neighborhood. The Harrier was carrying live ordnance and 1,300 people were evacuated. The pilots ejected safely and two people on the ground were injured. Harriers from MCAS Yuma have participated in Operation Snowbird.

The safety record of the F-22 has received much publicity. The Air Force claims that the problem with the air flow to the pilots has been corrected.

Many in Tucson haven't forgotten the crash of a D-M jet near the University of Arizona in 1978 <u>http://www.library.pima.gov/librarianfiles/?kbid=13</u> A 2003 article published in the University of Arizona's student newspaper, The Daily Wildcat, recaps the incident. Details about the accident, the pilot and victims involved, and the University of Arizona's reaction are included.

http://wc.arizona.edu/papers/97/44/01 1.html

Simply because there has not been a crash of a DM aircraft in Tucson in recent years, should not allow the Air Force to forget that the base is located in an urban area surrounded on three sides by residential development. The visiting Operation Snowbird pilots, who are unfamiliar with area, are give a short briefing and then they are expected to do precision flying over a densely populated area.

The words from the Davis-Monthan JLUS Section 5.1.2 "Safety" need to be remembered. "Although the risk to people on the ground of being killed or injured by a military aircraft accident is very small, such an event is by its nature of high consequence and may be catastrophic in the range and extent of its impact."

17. CONCLUSION

The OSB Draft EA is sorely lacking not only in detail, but in accuracy. A full EIS is clearly needed.

Anne Gomez 3455 E. Via Esperanza Tucson, AZ 85716

goanne@cox.net

(520) 297-1758

Please send me a copy of the Final Operation Snowbird EA. Thank you.



N

63.9

68.9 73.5 81.7 85.3

77.8





25000	20000	16000	12500	00001	0008	6300	5000	4000	3150	2500	2000	1600	1250	1000	008	630	500	400	315	250	200	160	125	100	Sit Dist (ft)	25% PM Humidity	95 Degrees	Approach Pwr
48.7	52.0	55.2	58.4	61.6	64.7	67.7	70.5	73.3	75.9	78.4	8.08	83.1	85.3	87.4	5.68	91.2	93.1	94.8	96.6	98.2	99.8	101.4	102,9	104.5	dB SEL	140 KTS	580.0 C TIT	C-130E
49.1	53.2	57.0	60.5	63.9	67.0	70.0	72.7	75.3	77.8	80.1	82.3	84.4	86.4	88.3	90.1	91.8	93.5	95.2	96.8	98.4	99.9	101.5	103.0	104.4	dB SEL	170 KTS	75.0 % NC	F-15A
47.3	52.1	56.5	60.4	64.1	67.4	70.5	73.3	76.0	78.5	80.5	83.2	85.4	87,5	89.5	91.5	93.3	95.2	97.0	98.7	100.4	102.0	103.6	105.2	106.7	dB SEL	197 KTS	- 82.5 % RPM	TORNADO
40.2	43.7	46.9	49.9	52.8	55.7	58.8	62.6	67.2	72.0	76.5	80.6	84.2	87.4	90.2	92.8	95.2	97.3	99.4	101.3	103.1	104.8	106.5	108,1	109,6	dB SEL	150 KTS	5225 NF	A-10A
55.6	59.8	63.8	67.4	70.8	74.0	76.9	79.7	82.3	84.8	87.2	89.4	91.5	93.6	95,5	97,4	2.66	100.9	102.6	104.2	105.8	107.4	108.9	110.4	111.9	dB SEL	160 KTS	82.5 % NC	F-16(P220)
48.2	53.0	57.7	62,2	66.3	70.1	73.7	76.9	80.0	82.8	5.58	88.1	90.5	92.9	95.2	\$7.E	99.5	101.5	103.5	105.3	107.1	108.8	110.5	112.1	113.6	dB SEL	204 KTS	65.0 % RPM	HARRIER
60.9	65.3	69.5	73.4	77.2	80.7	84.1	87.4	90.4	93,4	96.2	6.86	101.5	103.9	106.3	108.5	110.6	1127	114.5	115.5	118.2	120.0	121.5	123.3	124.8	dB SEL	150 KTS	84.0 % RPN	AV-8B

102.4 104.7 106.8 108.9 110.9 112,8 114.7 116.5 118.2 119,9 121.5 123.1 124.6

6.66

97.4

94.7

91.7

88.6

88.5 % NC

F-18

dB SEL 150 KTS

126.2

Annual Average 95 degrees w/ 26% PM humidity

ACFT dB Level





Resource	No Action Alternative	Alternative 1: Preferred Alternative	Alternative 2	Alternative 3
Noise	No additional increase in noise	Slight expansion of 65-decibel (dB) and 70-dB noise contour southeast and northwest of the base, 17 residences and three residences affected by increase in the 65-dB and 70 - decibel contours, respectively.	Same as Alternative 1	Same as Alternative 1
Air Quality	No additional emissions associated with No Action Alternative	Annual emissions of carbon monoxide (31.16 tons) and particulate matter (0.18 ton) would be below <i>de minimis</i> thresholds.	Annual emissions of carbon monoxide (28.28 tons) and particulate matter (0.15 ton) would be below <i>de minimis</i> thresholds.	Annual emissions would be similar to Alternative 2
Socioeconomícs	No additional activity would occur that would affect socioeconomic conditions	No adverse effects on population or public education would occur. Benefits would occur as units are deployed to Tucson area and increasing expenditures on hotels, car rentals, fuel, and meals. No displacement or relocation of residences or other community facilities would occur; thus, no adverse effects on community cohesion would be expected.	Same as Alternative 1	Same as Alternative 1
Property Values	No effect on property values	No effect on property values would be expected.	Same as Alternative 1	Same as Alternative 1
Environmental Justice	Disproportionate number of minority and low-income populations are affected by noise, compared to the City of Tucson	No significant increase of impacts on minority and low-income populations would occur as the 30-50 feet contour expansion would likely be imperceptible to residents.	Same as Alternative 1	Same as Alternative 1

Tahla 2-A ŋ 2 -

Public Safety

No additional increase in public risks would be expected.

Slight increase in potential risk factor due to the increase number of sorties to be flown under this alternative. However, risk factor is extremely low and OSB safety record of 0 mishaps would be expected to continue.

Same as Alternative 1

Same as Alternative 1

considered an austere lucation to which units deploy and perform equipment. etc.) (Lap top computers, specialized and all the nice to have equipment deployment, we don't accomplish (b), SIPRNET. We only have a littlight personnel just assist your aucrafi, personnel (Snowbird any generic location to include you would normally deploy with to please appract our personnel; lot of it. For specifies on equipment of equipment you may need, but not a For the flightline we have many types number of computers for foreign use Monthan AFB network which that are connected to the Davis Many of the offices have computers concept of a bate has a environment rooms, and helping you line up other Concept of Operations Includes: TASANIS_CAMS_ mid amount of equipment, based on the units to train with the getting you set up with dorm bombing ranges, and network access factifies and infrastructure to have a planning done before you get here. here to help you get all of your The permanent pany personnel are anding Area (LOLA), airspare From setting up the Live Ordinance great deployment **Operation Snowbird** a complete deployment **Operation** Snowbird is You bring all the toors that We provide a minimum What we provide: We provide you with the also from the 355th WG and all of Davis-Precision guided weapons, and many MK-82/84, Mavericks, CBU, JDAM, 162rdFW/ANG, and the 56th RMO, but Types of training available include: -L nquestioned support of not only the Units available to help with training -25 officer quarters thru base lodging -225(d) Sq Ft of office and maintenance -20 vans and trucks available for unit What we have to offer Viultiple Viariae aviation units -25484 Sq.Ft. 121 person dorm -12 of those are covered aircraft -20 permanent party personnel Live Drop to include: -38 aircraft parking spots -12 spot live load area -12 Air to Air Ranges 42 Acres of ramp space NNG Qualification -2 llelicopter units We have access to: Targeting Pods -12 E-16 units 4 TAC Ranges space available Monthan AFB 3 .\-10 units What we have: others. DACT melude: CSAR parking

Operation Snowbird



The worlds best team providing access to the worlds best training



Why Operation Snowbird?

3

Operation Sensebergis minute location and provinity to the Barry M. Goldwater Range gives us access not only to say of the worlds or a benchung tanges, but also to the worlds or a benchung tanges, but also to the worlds premiere are to accombing tarens. Tribuille ways us to other annual the news trajning opportunity that, an be found the world in art, which induction of the location gualtin article that and by C. Final Annual and also the after careful to the Maxweely Shores, MK 52 and 54, to Chill, and previous analysis.

Ibilation server name when we we served were the 162° FW 385° WG, and the 56° RMO the units that we best here at Operation Snowbird are categorized as regular users which helps as got higher priority in being awarded the range and airspace times requested

Overation Snewhird has the facilities and knew how to banke almost any platform from helicopters to fighter alreral of all types and configurations.

This opportunity is not only available to one Ait National Guard, but also in our sister services, and our allies from around the world. We have verse of eventoeyr in handling the unique needs of our orbits, book inveget and domessie, and we ve been doing so since 1975.



Opportunities for Site Operation Snowbird is Seeing and Recreation

Canyon, Las Vegas Nevada, and days drive away are the Grand (gateway to Mexico). Less then a San Diego California. Corral), and Nogales Arizona Diamond Backs), Crochner and Space Museum, and Sabino Tombstone (home of the OK Caverns; Colossal Cave, the city of to the Arizona Cardinals and the we have the city of Phoenix (host Canyon. Within a few hours drive Old Tucson Studios, The Pima Air Monument, the Desert Museum. to include the Saguaro National are many opportunities to site see. Tucson, AZ, Within the city there located in the beautiful city of

out into the desert 4x4mg, and of which host national events such seeing the sights. Theson is also local companies that will take you mountain biking, and a number of as the Bob Hope Chrysler Classic, home to over 25 Golf courses, many that allow for both road and of a work out we have many areas For those interested in more

the Snowbird Campus Facilities Available in

within a brick wall, this is to provide for the safety and security of our guest units and to provide for privacy, so that personnel can The Snowbird campus is fully enclosed concentrate on the mission at hand



A fully functional vehicle maintenance and Building 1707 AGE facility.



engineering contingent, and our power wash This houses our permanent party civil Building 1709 bay



Contains offices for the munitions troops and storage bays for the units. Building 1711

and the Tucson Open.



fight; Fight like

we train

Train like we

maintenance personnel. This facility also has where your unit can cook hunch or just relax: a fully covered patie and Barbeque area Has offices and break rooms for all your Building 1712



support, mission planning, conference rooms This is our newest building, containing life class rooms, and offices for command Building 1714 personnel.



covered parking spots for the comfort of your The Snowbird parking rump area has 12 maintenance personnel and aircrew, The Parking Ramp

(520)228-7174 or (520)228-7153 Commercial line at



228-7174 or 228-7153 If DSN Capable

By phone at:

162LNG/scheduliug@dm.af.mil

いたのないた

All units can contact us through our email at:

Fighter/Snowbird/Snowbird.htm

our web site at:

https://dox.ang.af.mil/XODHome

Our domestic units can see





If you'd like to accept the opportunity to come train ball rolling so you can get the with us, all you need to do is contact us and we'll get the bombs dropping.

Arizona Administrative Code

Page 1 of 1

ARTICLE 8. EMISSIONS FROM MOBILE SOURCES (NEW AND EXISTING)

A. This Article is applicable to mobile sources which either move while emitting air contaminants or are frequently moved during the course of their utilization but are not classified as motor vehicles, agricultural vehicles, or agricultural equipment used in normal farm operations.

B. Unless otherwise specified, no mobile source shall emit smoke or dust the opacity of which exceeds 40%.

Historical Note

Adopted effective February 26, 1988 (Supp. 88-1). Amended effective September 26, 1990 (Supp. 90-3). Amended effective February 3, 1993 (Supp. 93-1). Former Section R18-2-801 renumbered to Section R18-2-901, new Section R18-2-801 renumbered from R18-2-601 effective November 15, 1993 (Shpp. 93-4).

R18-2-802. Off-road Machinery

A. No person shall cause, allow or pennit to be emitted into the atmosphere from any off-road machinery, smake for any period greater than 10 consecutive seconds, the opacity of which exceeds 40%. Visible emissions when starting cold equipment shall be exempt

B. Off-road machinery shall include trucks, graders, scrapers, rollers, locomotives and other construction and mining machinery not nonnally driven on a completed public roadway.

· Historical Note

Adopted effective February 26, 1988 (Supp. 88-1). Amended effective September 26, 1990 (Supp. 90-3). Former Section R18-2-802 renumbered to Section R16-2-902, new Section R18-2-802 renumbered from R16-2-602 effective November 15, 1993 (Supp. 93-4).

No person shall cause, allow or permit to be emitted into the atmosphere from any heater-planer operated for the purpose of reconstructing asphalt pavements smoke the opacity of which exceeds 20%. However three minutes' upset time in any one hour shall not constitute a violation of this Section.

Historical Note

Adopted effective February 26, 1988 (Supp. 88-1). Amended effective September 26, 1990 (Supp. 90-3). Former Section R18-2-803 renumbered to Section R18-2-903, new Section R18-2-803 renumbered from R18-2-603 effective November 15, 1993 (Supp.

A. No person shall cause, allow or permit to be emitted into the atmosphere from any roadway and site cleaning machinery smoke or dust for any period greater than 10 consecutive seconds, the opacity of which exceeds 40%. Visible emissions when starting cold

B. In addition to complying with subsection (A), no person shall cause, allow or permit the pleaning of any site, roadway, or alley without equipment shall be exempt from this requirement for the first 10 minutes. iaking reasonable precautions to prevent particulate matter from becoming airborne. Reasonable precautions may include applying dust suppressants. Barth or other material shall be removed from paved streets onto which earth or other material has been transported by functing or earth moving equipment, crosion by water or by other means.

Adopted effective February 26, 1988 (Supp. 88-1). Amended effective September 26, 1990 (Supp. 90-3). Amended effective February 3, 1993 (Supp. 93-1). Former Section R18-2-804 renumbered to Section R18-2-904, new Section R18-2-804 renumbered from R18-2-604 effective November 15, 1993 (Supp. 93-4).

A. No person shall cause, allow or permit to be emitted into the atmosphere from any asphalt or tar kettle smoke for any period greater

B. In addition to complying with subsection (A), no person shall cause, allow or permit the operation of an asphalt or tar kettle without minimizing air contaminant emissions by utilizing all of the following control measures:

1. The control of temperature recommended by the asphalt or tar manufacturer,

2. The operation of the kettle with lid closed except when charging 3. The pumping of asphalt from the keitle or the drawing of asphalt through cocks with no dipping;

4. The dipping of tar in an approved manner;

5. The maintaining of the kettle in clean, properly adjusted, and good operating condition;

6. The firing of the kettle with liquid petroleum gas or other fuels acceptable to the Director.

Historical Note

Adopted effective February 26, 1988 (Supp. 88-1): Amended effective September 26, 1990 (Supp. 90-3). Former Section R18-2-805 remumbered to Section R18-2-905, new Section R18-2-805 renumbered from R18-2-605 effective November 15, 1993 (Supp.



Arizona Department of Environmental Quality

1110 West Washington Street • Phoenix, Arizona 85007 (602) 771-2300 • www.azdeq.gov



Henry R. Darwin Director

Janice K. Brewer Governor

August 31, 2012

Mr. Larry H. Dryden, P.E. Chief, Sustainable Installations Branch (A7PS) ATTN: OSB EA COMMENT SUBMITTAL 355th Fighter Wing Public Affairs 3180 S. First Street Davis-Monthan AFB, AZ 85707

RE: Davis-Monthan AFB: Scoping Letter for the National Guard Bureau Training Plan 60-1 in Support of Operation Snowbird, Environmental Assessment

Dear Mr. Larry H. Dryden:

The ADEQ Air Quality Division has reviewed your letter dated July 27, 2012, requesting a Scoping Letter for the National Guard Bureau Training Plan 60-1 in Support of Operation Snowbird. Your project is located in a carbon monoxide (CO) maintenance area. For further information, please refer to

http://www.pagnet.org/tabid/36/default.aspx

Scroll down to the bottom left of the page to Plans, then click on Carbon Monoxide Limited Maintenance Plan. At the bottom of the screen, Documents are listed for your review.

As described, your project may have a de minimis impact on air quality. Disturbance of particulate matter is anticipated during travel on dirt roads and flight arrivals and departures. Considering prevailing winds, to comply with other applicable air pollution control requirements and minimize adverse impacts on public health and welfare, the following information is provided for consideration:

REDUCE DISTURBANCE of PARTICULATE MATTER

This action, plan or activity may temporarily increase ambient particulate matter (dust) levels. Particulate matter 10 microns in size and smaller can penetrate the lungs of human beings and animals and is subject to a National Ambient Air Quality Standard (NAAQS) to protect public

Northern Regional Office 1801 W. Route 66 • Suite 117 • Flagstaff, AZ 86001 (928) 779-0313

Southern Regional Office 400 West Congress Street • Suite 433 • Tucson, AZ 85701 (520) 628–6733

Printed on recycled paper

Ms. Kimberly D. Bose August 31, 2012 Page 2

health and welfare. Particulate matter 2.5 microns in size and smaller is difficult for lungs to expel and has been linked to increases in death rates; heart attacks by disturbing heart rhythms and increasing plaque and clotting; respiratory infections; asthma attacks and cardiopulmonary obstructive disease (COPD) aggravation. It is also subject to a NAAQS.

The following rules applicable to reducing dust from open areas, dry washes or riverbeds, roadways and streets are enclosed:

- Arizona Administrative Code R18-2-604 and R18-2-605
- Arizona Administrative Code R18-2-804

Should you have further questions, please do not hesitate to call me at (602) 771-2375, or Lhamo LeMoine at (602) 771-2373.

Very truly yours,

main hand

Diane L. Arnst, Manager Air Quality Planning Section

Enclosures (2)

cc: Sherri Zendri, Administrative Counsel Lhamo LeMoine, Administrative Secretary File No. 291955 c. If the bunning would occur at a solid waste facility in violation of 40 CFR 258.24 and the Director has not issued a variance under A.R.S. § 49-763.01.

- Open outdoor fires of dangerous material. A fire set for the disposal of a dangerous metarial is allowed by the provisions of this Section, when the material is too dangerous to store and transport, and the Director has issued a permit for the fire. A permit issued under this subsection shall contain all provisions in subsection (D)(3) except for subsections (D)(3)(c) and (D)(3)(f). The Director shall pennit fires for the disposal of dangerous materials only when no safe alternative method of disposal exists, and burning the materials does not result in the emission of hazardous or toxic substances either directly or as a product of combustion in amounts that will endanger health or safety.
- F. Open outdoor fires of household waste. An open outdoor five for the disposal of household waste is allowed by provisions of this Section when permitted in writing by the Director or a delegated sufficiency. A permit issued under this subsection shall contain all provisions in subsection (D)(3) except for subsections (D)(3)(e) and (D)(3)(f). The permittee shall conduct open outdoor fires of household wastein an approved waste burner and shall either:
 - 1. Burn household waste generated on-site on farms or ranches of 40 acres or more where no household waste collection or disposal service is available; or
 - 2. Burn household waste generated on-site where no household waste collection and disposal service is available and where the nearest other dwelling unit is at least 500 feet away.
- G. Permits issued by a delegated authority. The Director may delegate authority for the issuance of open burning permits to a county, oily, town, air pollution control district, or fire district. A delegated authority may not issue a nemit for its own open burning activity. The Director shall not delegate authority to issue permits to born dangerous material under subsection (B). A county, city, town, ar pellution control district, or fire district with delegated anthonity from the Director may assign that authority to one or more private fire protection service providers that perform fire protection services within the county, city, town, air pollution control district, or fire district. A private fire protection provider shall not directly or indirectly condition the issuance of open burning permits on the applicant being a costomer. Permits issued under this subsection shall comply with the requirements in subsection (D)(3) and he in a format prescribed by the Director. Each delegated authority shall:
 - 1. Maintain a copy of each permit issued for the previous five years available for inspection by the Director,
 - 2. For each permit currently issued, have a means of contacting the person authorized by the permit to set an open fire if an order to extinguish open burning is issued; and
 - 3. Annually submit to the Director by May 15 a record of daily burn activity, excluding household waste burn permits, on a form provided by the Director for the previous calendar year containing the information required in subsections (D)(3)(a) and (D)(3) (£).
- H. The Director shall hold an annual public meeting for interested parties to review operations of the open outdoor fire program and discuss emission reduction techniques.
- I. Nothing in this Section is intended to permit any practice that is a violation of any statute, ordinance, rule, or regulation.

Historical Note

Adopted effective May 14, 1979 (Supp. 79-1). Aniended effective October 2, 1979 (Supp. 79-5). Correction, subsection (C) repealed effective October 2, 1979, not shown (Supp. 80-1). Former Section R9-3-602 remumbered without change as Section R18,2-602 (Supp. 87-3). Amended effective September 26, 1990 (Supp. 90-3). Former Section R18-2-602 renumbered to R18-2-502, new Section R18-2-602 renumbered from R18-2-401 effective November 15, 1993 (Supp. 93-4). Amended by final miemaking at 10 A.A.R. 388, effective March 16, 2004 (Supp. 04-1).

R18-Z-603. Repealed

Historical Note

Adopted effective May 14, 1979 (Supp. 79-1). Former Section R9-S-503 renumbered without change as Section R18-2-603 (Supp. 87-3). Amended effective September 26, 1990 (Supp. 90-3). Former Section R18-2-603 renumbered to R18-2-803, new Section R18-2-603 renumbered from R18-2-403 effective November 15, 1993 (Supp. 93-4). Repealed effective October 8, 1996 (Supp.

R18-2 601. Open Avens, Dry Washes, or Riverbads

- A. No person shall cause, suffer, allow, or permit a building or its appurenances, or a building or subdivision site, or a driveway, or a parking area, or a vecant lot or sales lot, or an urban or suburban open area to be constructed, used, altered, repaired, demolished, cleared; or leveled, or the earth to be moved or excavated, without taking reasonable prevantions to limit excessive amounts of particulate matter from becoming sitbome. Dust and other types of air contaminants shall be kept to a minimum by good modem. practices such as using an approved dust suppressant or adhesive soil stabilizer, paving, covering, landscaping, continuous weiting, detouring, barring access, or other acceptable means.
- B. No person shall cause, suffer, allow, or pennit a vacant lot, or an urban or suburban open area, to be driven over or used by motor vehicles, trucks, cars, cycles, bikes, or buggles, or by animals such as horses, without taking reasonable precautions to limit excessive amounts of particulates from becoming airbome. Dust shall be kept to a minimum by using an approved dust suppressant, or adhesive soil stabilizer, or by paving, or by baring access to the property, or by other acceptable means.
- C. No person shall operate a motor vehicle for recreational purposes in a dry wash, riverbed or open area in such a way as to cause or contribute to visible dust emissions which then cross property lines into a residential, receational, institutional, educational, retail sales, hotel or business premises. For purposes of this subsection "motor vehicles" shall holude, but not be limited to trucks, cars, cycles, bikes, buggies and 3-wheelers. Any person who violates the provisions of this subsection shall be subject to prosecution under A.R.S. 8 49-463.

Historical Note

Adopted effective May 14, 1979 (Supp. 79-1). Former Section R9-3-604 renumbered without change as Section R18-2-604 (Supp. 87-3). Amended effective September 26, 1990 (Supp. 90-3). Former Section R18-2-604 repumbered to R18-2-804, new Section R 18-2-604 renumbered from R18-2-404 and amended effective November 15, 1993 (Supp. 93-4).

178-2-665, Readways and Streets

A. No person shall cause, suffer, allow or permit the use, repair, construction or reconstruction of a roadway or alley without taking reasonable precautions to prevent excessive amounts of particulate matter from becoming airborne. Dust and other particulates shall be kept to a minimum by employing temporary pawing, dust suppressants, wetting down, detouring or by other reasonable means, B. No person shall cause, suffer, allow or permit transportation of materials likely to give rise to airborne dust without taking reasonable

precautions, such as waiting, applying dust suppressants, or covering the load, to prevent particulate matter from becoming abbome. Barth or other material that is deposited by fucking or earth moving equipment shall be removed from paved streets by the person

responsible for such deposits.

Historical Note

Adopted effective May 14, 1979 (Supp. 79-1). Former Section R9-3-605 renumbered without change as Section R18-2-605 (Supp. 87-3). Amended effective September 26, 1990 (Supp. 90-3). Former Section R18-2-605 renumbered to R18-2-805, new Section R18-2-605 renumbered from R18-2-405 effective November 15, 1993 (Supp. 93-4).

R12-2-606, Material Handling

No person shall cause, suffer, allow or permit crushing, screening, handling, transporting or conveying of materials or other operations likely to result in significant amounts of airbome dust without taking reasonable precautions, such as the use of spray bars, wetting agents, dust suppressants, covering the load, and hoods to prevent excessive amounts of particulate matter, from becoming airborne.

Historical Note

Section R12-2-606 renumbered from R12-2-406 effective November 15, 1993 (Supp. 93-4).

- A. No person shall cause, suffer, allow, or permit organic or inorganic dust producing material to be stacked, piled, or otherwise stored without taking reasonable precautions such as chemical stabilization, wetting, or covering to prevent excessive amounts of particulate
- B. Stacking and reclaiming machinery utilized at storage piles shall be operated at all times with a minimum fall of material and in such manner, or with the use of spray bars and weiting agents, as to prevent excessive amounts of particulate matter from becoming airborne,

Historical Note

Section R18-2-607 renumbered from R18-2-407 effective November 15, 1993 (Supp. 93-4).

No person shall cause, suffer, allow, or permit construction of mineral tailing piles without taking reasonable precautions to prevent excessive amounts of particulate matter from becoming airborne. Reasonable precautions shall mean weiting, chemical stabilization, revegetation or such other measures as are approved by the Director.

Historical Note

Section R18-2-608 remunibered from R18-2-408, new Section R18-2-408 adopted effective November 15, 1993 (Supp. 93-4).

A person shall not cause, suffer, allow, or permit the performance of agricultural practices outside the Phoenix and Yuma planning areas, as defined in 40 CFR 81.303, which is incorporated by reference in R18-2-210, including tilling of land and application of fertilizers without taking reasonable precautions to prevent excessive amounts of particulate matter from becoming airborne,

Historical Note

Section R18-2-609 renumbered from R18-2-409 effective November 15, 1993 (Supp. 93-4). Amended by final rulemaking at 6 A.A.R. 2009; effective May 12, 2000 (Supp. 00-2). Amended by final rulemaking at 11 A.A.R. 2210, effective July 18, 2005 (Supp. 05-2).

R18-2-610, Definitions for R18-2-611

The definitions in Article 1 of this Chapter and the following definitions apply to R18-2-611:

- 1. "Access restriction" means restricting or climinating public access to noncropland with signs or physical obstruction.
- 2. "Aggregate cover" means gravel, concrete, recycled road base, caliche, or other similar material applied to noncropland.
- 3. "Artificial wind battler" means a physical battler to the wind.
- "Best management practice" means a technique verified by scientific research, that on a case-by-dase basis is practical, economically feasible, and effective in reducing PM 10 emissions from a regulated agricultural activity.
- 5. "Chemical inigation" means applying a fertilizer, pesticide, or other agricultural chemical to cropland through an inigation
- 6. "Combining fractor operations" means performing two or more tillage, colitivation, planting, or harvesting operations with a single
- 7. "Commercial farm" means 10 or more contignous acres of land used for agricultural purposes within the boundary of the Maricopa PM 10 nonattainment area.
- 8. "Commercial famer" means an individual, entity, or joint operation in general control of a commercial fam.
- 9. "Committee" means the Governor's Agricultural Best Management Practices Committee,
- 10. "Cover prop" means plants or a green manure group grown for seasonal soil protection or soil improvement.
- 11. "Critical area planting" means using trees, shrubs, whiles, grasses, or other vegetative cover on noncropland.
- 12. "Cropland" means land on a commercial farm that:
 - a, is within the time-frame of final harvest to plant emergence;
 - b. Has been tilled in a prior year and is suitable for crop production, but is currently fallow; or

c. Is a turn-row.

Blenman-Elm Neighborhood Association P.O. Box 42092 Tucson AZ 85733 September 13, 2012

ATTN: OSB EA Comment Submittal 355th Fighter Wing Public Affairs 3180 South First Street Davis-Monthan AFB, AZ 85707

Sirs:

Enclosed is a resolution that was passed by the Board of Directors of the Blenman-Elm Neighborhood Association, in Tucson.

Please ensure the resolution is carefully considered by the U.S. Air Force, and is included in the Operation Snowbird Environmental Assessment.

Sincerely,

Linda Phelan

Linda Phelan Secretary, Board of Directors Blenman-Elm Neighborhood Association

Enclosure: BENA Board of Directors' Resolution

RESOLUTION

Operation Snowbird Environmental Assessment

The Board of Directors of the Blenman-Elm Neighborhood Association, which represents 1,700 households in Tucson's midtown, believes a full Environmental Impact Statement is necessary to properly assess the effects of an expanded Operation Snowbird.

The draft Environmental Assessment for Operation Snowbird does not justify a Finding of No Significant Impact. The EA is flawed and incomplete.

The EA's noise analysis fails to include the noisiest of OSB's aircraft: the F-18, the F-22, and the Harrier. Instead, the analysis considers only quieter aircraft, which it erroneously states are "representative."

The EA uses DNL averages to conclude that the noise of OSB aircraft will not significantly affect Tucson's residents. The EA ignores the impacts of peak noise levels; this is contrary to the recommendations of the Department of Defense. (See, for example, DoD's publications, *Using Supplemental Noise Metrics and Analysis Tools* (2009) and *Operational Noise Manual* (2005).)

The noise analysis is based on a 2007 study, which the public has not been permitted to see. This violates federal regulations, which state that the study must be "reasonably available for inspection by potentially interested persons within the time allowed for comment."

The EA focuses only on residents who live within the Davis-Monthan noise contours. It does not analyze the noise and safety impacts on midtown neighborhoods such as ours.

We are especially concerned that the EA fails to analyze the sound exposure levels of flights made between 10:00 PM and 7:00 AM, and it fails to analyze the effects of the nighttime SELs on residents.

The EA's safety analysis is incomplete. It fails to consider the safety of the F-18, F-22, and Harrier, which have the worst safety records of all the domestic fighter craft that OSB uses. Further, of all the foreign aircraft that OSB will bring to Tucson, the EA analyzes the safety only of the Tornado. For those of us who live beneath the flight paths of OSB aircraft that will carry live armaments at least part of the time, this is a great concern.

Increased aircraft noise will adversely affect Tucson's tourism industry, which generates more than \$2 billion annually in direct spending and 21,500 direct jobs. The EA states that it would be difficult to quantify the effects of the noise on tourism, so it simply ignores the problem.

The increased noise will affect property values. The EA ignores this.

At least four schools and the University of Arizona lie directly beneath OSB flight paths. Many studies have shown that aircraft noise adversely affects students' performance. The EA fails to consider this.

For these reasons, the Board of Directors of the Blenman-Elm Neighborhood Association believes the Air Force can make an informed decision only by completing a full Environmental Impact Statement.

eptember 11, 2012

ATTN: OSB EA Comment Submittal 355 Fighter Wing Public Affairs 3180 S First Street Davis-Monthan AFB Tucson, AZ 85707

After examining this EA & its conclusion, the conclusion I have reached is "FOSIM" (Finding Of Significant Intent to Misinform). This EA distorts reality & tries to convince the public to suspend all reason & logic, & accept the irrational conclusion that almost doubling the number of over-flights (from 1,190 sorties to 2,256 1) & allowing night flights, will be so insignificant, that it will not be noticeable to those who live under or near the flight paths. Even a fourth grader knows that this will almost double the noise & risk of accidents in the fly-over area.

And this is only one of the claims, which make it apparent that this EA was greatly skewed specifically to ensure a "FONSI".

OSB has operated outside NEPA law for decades. *The last true OSB EA* (required before any expansion) was in 1978. However OSB greatly expanded in the 1990s, & by 2000 bore little resemblance to the original OSB. Yet for this EA, they used a "baseline date" of 2002... *after all...* major changes were made without an EA. This slight of hand avoids having to assess the impact of illegal changes already made, & illegally elevates "baseline" impact measurements, so proposed changes are never compared to the lower impact of the original OSB.

OSB has been operating outside of NEPA federal law. I question: (i) the expansion of OSB at a Base whose location forces low level approaches over a metropolitan area in terms of safety and noise; (ii) the choice of baseline year being used for comparison; (iii) the lack of consideration of reasonable alternative basing; (iv) ignoring environmental justice of affected low-income and minorities. In addition, there were comments on economics, health and safety.

How about noise impact measurement? They use an inappropriate tool, "noise averaging" which measures all noise & quiet time for an entire 24-hour period, & then averages all the hours of silence, in with the periods of over-flights (which, although extremely loud, last only a few minutes each). By averaging, they come up with an extremely watered down, useless number, which predicts "No Significant Impact" under or near the over-flights.

This tool is so ill-suited for measuring brief, but loud noise impact, that if it were used to determine the impact of having a neighbor shoot a cannon every hour & remain quiet the rest of the time, the conclusion would be "No Significant Impact... only an insignificant, unnoticeable rise in overall noise".

Almost any other form of measuring noise impact would be better. Such as.... for each type of plane flying over a designated point on the ground, they could have recorded &

measured the level of noise, & multiplied that by the number of times that particular type of plane flew over that point in the baseline year.

Then they could do the same for each of the proposed future planes, & just as before, multiply each of those, by the number of flights proposed for each type plane.

Even this crude method (comparing these two sets of resulting numbers) would give us a better indication of how much of a change to expect than their "noise averaging".

In 1978 the Air Force promised changes regarding noise and accident potential after the crash at the U of A near a middle school, killing two sisters. Mo Udall outlined the changes in a Congressional Report, money was available and the military had agreed, yet nothing was ever done regarding this proposed change. I think the military has a responsibility to assure that those **non-military citizens** are protected from living in a war zone with war aircraft screaming overhead. And that the people of Tucson can live in a quiet safe environment. It is especially hard on those like me who are disabled and have multiple medical problems and can't move at the snap of a finger because of costs. My heart, sleep, and ability to enjoy life have been truly affected by these **military war aircraft** screaming, and chopping over my house. Non-military shouldn't have to endure living in a military atmosphere. I didn't choose to join the military and I don't want to live the life of a military person. **I greatly respect, and admire those who do, and God knows we need** them but at my age, and with my health, I don't fit in to the category of military life. I suspect there are a lot more just like me, disabled, multiple medical problems, and not wanting to live under a war zone.

Thank you for the opportunity to comment,

Caro

Carol Stoner 65 N Cheesebrush Ave Tucson, AZ 85748 (520)-298-9741 c_stone77/amsn.com

eptember 11, 2012

September 13, 2012

ATTN; OSB EA COMMENT SUBMITTAL 355th Fighter Wing Public Affairs 3180 S. First Street Davis-Monthan AFB, AZ 85707

To Whom It May Concern:

It concerns me that my neighborhood has to content with the air traffic noise from Davis-Monthan and the Air National Guard. This air traffic noise has continued to increase over the years without public notification. And now it concerns me that no written notification was given to our neighborhood about this proposal to increase Operation Snowbird flights. There are lots of areas that can be used instead of a high populated city like Tucson. The Operation Snowbird planes can fly over our neighborhood any time of day or night. What happened to the peace and quiet in our city? This proposal of increasing Operation Snowbird flights is just not right for our city or our neighborhood.

Thank you for your consideration.

Sincerely, Carolyn Emmons 5413 E. Bellevue Street Tucson, Arizona 85712 520 881-8124 Realtor
ATTN: OSB EA Comment Submittal 355th Fighter Wing Public Affairs 3180 South First Street Davis-Monthan AFB, AZ 85707

Sirs:

The draft Environmental Assessment for Operation Snowbird uses 2009 as its baseline. No justification is given for this, aside from the claim that 2009 is "representative" of current operations.

The EA ignores the fact that current operations are being conducted without benefit of an environmental analysis, and are in violation of the National Environmental Policy Act.

During the scoping phase of this EA, the Air Force recognized that the baseline must be predicated upon an earlier environmental analysis. Consequently, it adopted the 2002 CSAR EA as its baseline. The CSAR EA is "the assessment OSB currently operates under," the Air Force said at the time.

When members of the public pointed out that the CSAR EA had not included an analysis of OSB aircraft, the Air Force wrongfully decided to use a baseline that was not supported by an earlier environmental analysis.

The Air Force has completed only one analysis of the environmental impacts of OSB aircraft. That analysis was made in 1978, and it is the baseline that the Air Force must use now.

The Wyle Study, which was commissioned by the Air Force, states that the 1978 EA is "the prevailing EA." Further, the Wyle Study is very clear that a 1978 baseline must be used.

The 1978 analysis is the only justifiable baseline for the current EA.

Sincerely,

Cheryf Houser Cheryl Houser

Resident of Tucson

220 East Drachman Street Tucson, AZ 85705

> Attn: OSB EA Comment Submittal 35th Fighter Wing Public Affairs 3180 South First Street Davis-Montham AFB, AZ 85707

> > September 12, 2012

To Whom It May Concern:

I have just discovered that you are planning on increasing the number of flights in and out of your base, without conducting public meetings or really letting the inhabitants of Tucson and the surrounding area know what your intentions are. I have discovered that you have produced an incredibly faulty environmental assessment of your plan.

I am writing to request you conduct a proper full objective environmental impact statement and stop behaving as though this is some military-run third world country.

Sincerely,

Christina Weissauer-Condon, MD



Colonia Solana Homeowners Association

OSB EA Comment Submittal 355th Fighter Wing, Public Affairs 3180 S. First Street DMAFB, AZ 85707 September 11, 2012

RE: Comments on the Draft Environmental Assessment For Operation Snowbird

Dear 355th Fighter Wing Public Affairs Division:

The Colonia Solana Homeowners Association (CSHA) comprises 123 homes and is considered one of the most unique residential areas in Arizona. Designed in 1928 by landscape architect Stephen Child, who was mentored by famed architect Frederick Law Olmstead, it incorporates natural elements such as Arroyo Chico, which is a lush riparian and desert habitat for birds and wildlife. Child designed the neighborhood with home sites of approximately an acre around five small triangular parks and intersecting curvilinear streets. The neighborhood was predominantly built out during the 1930's and 40's and features homes designed by a variety of prominent architects in styles ranging from Spanish Colonial Revival to post-war ranch houses.

Colonia Solana is situated in the heart of Tucson. It is home to 87 species of birds, the most found in any neighborhood in the city limits. It is bordered on the north by Broadway Blvd., on the south by Reid Park and the adjacent Reid Park Zoo and Hi Corbett Field, on the west by Country Club and on the east by Randolph Way and the Randolph Golf Course. Hi Corbett Field is the home of the University of Arizona baseball team and has a seating capacity of 10,000. The City of Tucson recently spent over \$20 million for a world class breeding enclosure for elephants at the Reid Park Zoo. In 1975 an adjustment was made to the air traffic pattern at the request of the City not to have any flights over Randolph Park or the Zoo.

The CSHA Board of Directors recently met and voted to oppose the basing of Operation Snowbird (OSB) in Tucson as specified in the draft Environmental Assessment (EA) and maintain that an Environmental Impact Study (EIS) is required.



(C) Incomplete safety data

The safety data provided for OSB aircraft is on a Table developed by the AF listing certain risk factors. DMAFB refuses to furnish for public examination and comment the methodology and the calculations for its safety analysis. To the extent available, it is obvious that a complete safety analysis is lacking. For example, the F-15 is at the end of its service life and one disintegrated in flight approximately 3 years ago resulting in grounding the entire fleet. The AF does not consider this significant safety risk in its safety analysis. In addition, it does not analyze Class B and C accidents and totally refuses to furnish any safety analysis for the Mirage, Typhoon, Kfir, and Rafale.

(D) No Environmental Justice Analysis Performed

The AF refuses to address the significant issue of "environmental justice" presented by its desired proposals. In the draft EA, the AF admits that OSB disproportionately impacts minority and low-income populations who reside in 826 homes and 134 multifamily complexes near DMAFB. Because of their proximity to military aircraft operations, these dwelling units are deemed "incompatible with residential use". Under Executive Order 12898 (Environmental Justice), the AF is required to conduct a complete analysis of all the "environmental effects, including human health, economic and social effects of Federal actions" on the minority and low-income community. The AF did not make such an analysis.

(E) No Assessment of the Impact of OSB on Children Performed

The AF also refuses to assess the impact of OSB on children. Executive Order 13045 requires the AF to assess the health and safety risks that may disproportionately affect children but no such assessment is made. There are no less than four (4) schools under the flight path: Griffen Foundation Charter School, Robison Elementary, Howenstine High School, and St. Ambrose Elementary.

(F) Incomplete participation by all Tucsonans

A review of the draft EA makes plain it is a very technical document filled with unfamiliar jargon. Many of those impacted by OSB speak English as a second language, Spanish being their primary language. Request was made of the AF that the draft EA be published in Spanish so that all impacted could understand the AF's proposed OSB expansion and comment on it. The AF has refused to do so.



OSB program on our community, how the changes will adversely and irrevocably impact the habitability and viability of major sections of Tucson, particularly the central city, downtown, the University area and the residential areas that surround DMAFB. Yet despite seeking to virtually double the sorties as noted above with new noisier and less safe aircraft and refusing to assess the cumulative impacts of its proposed changes, DMAFB has the temerity to conclude OSB will not have a significant impact on the quality of the human or natural environment (FONSI) and now refuses to initiate an EIS.

The draft EA for OSB is slipshod, incomplete, fails to fully and properly disclose the bases for certain conclusions, is written such that a lay person has difficulty understanding it and fails to properly assess all the impacts of OSB on our community

(A) AF proposes almost doubling OSB flights and, for the first time, flights at all hours of the night

In the draft EA the AF proposes, among other things: slightly less than doubling the number of sorties flown from DMAFB over the most densely populated areas Tucson (1190 sorties to 2256 sorties) from 2009, expanding the range of aircraft operated, and for the first time proposes flights between 10pm and 7am. The aircraft will include the F-18, the F-15, F-22, AV-8 Harriers, Mirage, Typhoon, Kfir, Ospreys and Rafale. Certain of these aircraft promise to be louder than any previous aircraft and the safety record is not fully provided.

(B) The AF refuses to disclose the 2007 Noise study upon which its "noise analysis" is based, but nevertheless averages the noise over a 24 hour period and minimizes the noise generated from certain of the noisiest OSB aircraft

Additionally, the 2007 Noise Study (ACC2007), which is the basis of the new noise contours for OSB, that the AF used to assess the actual noise OSB aircraft actually generate is not disclosed. Despite the fact the AF refuses to disclose this "noise study", to the extent known, it is inaccurate and utterly misleading. For example, the "noise study" minimized actual noise generated by OSB aircraft by averaging noise over a 24 hour basis and did not even measure all the OSB aircraft, notably eliminating from the "study" the noise levels of some of the noisiest aircraft, such as the F-18, the F-15, F-22, Harriers, and Ospreys. This Noise Study should be contrasted with the military's own noise guidelines (NIOSH) used to protect its service people from damaging their hearing from noise. NIIOSH uses a cumulative measure, not 24 hour averaging, which if applied to OSB would only allow a few minutes of exposure to the noise levels that some neighborhoods currently experience on the ground from some of the OSB aircplanes.



Background

By way of background, OSB officially began in 1975 as a National Guard program supported by the Arizona Air National Guard (ANG) to provide training to northern tier Air National Guard flying units at Davis Monthan (DMAFB) during 2 week periods between November and April. The OSB aircraft initially operated were F-100 and A-7s. (Wyle Study*, pp.5,18-19)

In 1978, the National Environmental Policy Act (NEPA) required that ANG conduct an EA of OSB. However, the draft EA did not meaningfully assess the nature and extent of the aircraft flying and training over Tucson. (Wyle Study, pp.7,54) Between 1988-1992, OSB aircraft dramatically changed from F-100 and A-7s to F-16s, which are far noisier and less safe. In 2000, the program again drastically changed from a 6-month program to a year-round program, including training of international pilots. From 2000 to present, the type of OSB aircraft again substantially changed, adding C-130, F-18, helicopters, F-15, British Tornados, Harriers and F-3s, among others. (Wyle Study, pp.23-25). These changes once again increased the noise levels on a more sustained basis and presented additional concerns about the safety of these aircraft. We emphasize that at no time during these expansions did DMAFB ever alert the community to these changes in OSB operations or aircraft nor did it seek NEPA approval, as required by law.

In the course of Military Community Relations Committee (MCRC) meetings, it was determined that DMAFB had been operating OSB in violation of NEPA since approximately 1988, when the program drastically and substantially changed. As a consequence of neighborhoods' examination of OSB, in November 2008, DMAFB requested that an Environmental Impact Statement (EIS) of OSB be conducted, but inexplicably, its request was denied. (Wyle Study, p.54)

The current OSB program, which has expanded military operations year-round with aircraft too noisy and dangerous to be flying over the most densely populated areas of Tucson, represents over twenty (20) years of the Air Force (AF) systematically violating NEPA. The AF, by continuing to secretly expand OSB, deprived Tucsonans of their legal rights to timely object to DMAFB's illegal conduct. Despite the fact this program can be operated out of other AF installations, DMAFB has been continuing to operate OSB knowingly in violation of NEPA since 2008.

The expansion of OSB the AF proposes in the draft EA almost doubles the number of sorties flown from DMAFB over the most densely populated areas Tucson (from 1190 sorties in 2009 to 2256 sorties), expands the range of aircraft operated, and for the first time seek nighttime flights between 10 pm and 7 am. These changes are dramatic and significant in many ways. However the draft EA, authored in the most conclusory of terms, completely ignores the cumulative impacts of an expanded



(G) Cumulative Effects and the Impact on Tourism are not measured

NEPA requires analysis of the cumulative effects of Federal action, not simply those of the specific proposed action. In addition to OSB, substantial other military operations are conducted out of DMAFB and Tucson International Airport, Department of Homeland Security as well as civilian and commercial aircraft operate over Tucson. The cumulative impact of these operations along with the its effect on tourism is not considered in the draft EA. Further economically, tourism generates over \$2 billion in spending annually and is responsible for over 21,500 direct jobs. Whereas DMAFB's best estimate of the economic impact of OSB was "maybe" \$300,000. The draft EA does not analyze the cumulative impact of OSB on Tucson.

An EIS of OSB should be prepared

NEPA requires an EIS be completed before major federal action is undertaken that significantly affects the quality of the human environment. An EIS differs from an EA in that an EIS is a far more rigorous and complete process and also requires a review of alternative locations to the proposed federal action. In 2008, DMAFB admitted that an EIS of OSB was required but the Department of Defense refuses to perform an EIS. DMAFB should now be compelled to conduct the EIS that the law requires.

We and our neighbors have worked hard with representatives of DMAFB over the last six years to reach a mutually amicable resolution to this and other issues. This draft EA makes apparent that DMAFB is not interested in being a "good neighbor." Rather, DMAFB seeks to enlarge its mission from an A-10 base into a year-round, full-time base for training foreign and visiting pilots using some of the most sophisticated, noisy and dangerous aircraft. This aircraft and OSB program is unsuitable for our urban environment and will unduly impact us all, including low-income and minority populations. Expanding OSB with all the aircraft proposed will make DMAFB's operations more invasive and will render many parts of the central city simply incompatible for residential use. We are also concerned that in the future OSB will be expanded to include the F-35.

Significantly, DMAFB is not the only suitable location for OSB. In fact, DMAFB competes with other AF installations for OSB. Among other benefits, an EIS would allow the AF to actually compare among all AF installations the base most suited for this program. Given the budgetary issues facing our country, for the AF to refuse to conduct an EIS would be irresponsible.



Conclusion

Obviously, OSB is a critical issue to many of us who operate businesses, have invested our lives in Tucson, and have much of our savings in our homes. The current OSB and the expansion of it specified in the draft EA should not be based at DMAFB in Tucson, and a full and complete EIS should be conducted.

Respectfully submitted,

Bill DuPont President of Colonia Solana Homeowner's Association

* During 2009-2010, Wyle conducted a study of OSB on behalf of DM and ANG and issued its report in late 2010. The report is based solely on information furnished to it by DM and ANG. Wyle neither audited the information provided to it (it termed some of the data collection "inconsistent"), nor did it conduct its own testing. (Wyle Study, pp54-55) References to the Wyle Study here refer to certain pages of its study and the documents upon which it is based. 13 - September - 2012

ATTN: OSB EA COMMENT SUBMITTAL 355th Fighter Wing Public Affairs 3180 S. First Street Davis-Monthan AFB, AZ 85707

- Name: Dave Weaver
- Date: 9/13/2012
- E-Mail Address account22201@yahoo.com
- Mailing Address: 3016 N. Cherry ST

Comment: I very much <u>against</u> extending Operation Snowbird especially for non-American citizen. You need to realize that this base is in the middle of a city. Who was here first is moot at this point. Please reduce it or end it completely. I would suggest you move the base west of Tucson were land is cheap and you can train all you want. Use my tax money for the move...no problem. Also I believe Luke AFB would love to have you.

Dave Weaver

PS. Also, Please do a complete environmental assessment

August 25, 2012

ATTN: OSB EA COMMENT SUBMITTAL 355th Fighter Wing Public Affairs 3180 S. First Street Davis-Monthan AFB, AZ 85707

welle David Devine August 25, 2012

ddevine1705@yahoo.com 1705 E. Water Street, Tucson, AZ 85719 Comment:

In October of 1978, an A-7D Corsair II approaching Davis-Monthan crashed just south of the University of Arizona, killing two sisters. Shortly after this tragic accident, Brig. Gen. Robert E. Kelley announced that he had ordered "landing approaches across the city to the Davis-Monthan Air Force Base runway will be reduced by 50 percent..." (*Arizona Daily Star*, October 28, 1978).

According to estimates, prior to the crash in 1978 "roughly 2,900 planes a month were passing directly over the campus on landings or takeoffs from D-M" (*Arizona Daily Star*, August 30, 1988).

The draft environmental assessment for Operation Snowbird indicates that the preferred alternative will allow 2,256 sorties. These flights will be in addition to the other missions flown from DM.

Nowhere in the assessment, however, is an estimate provided as to the total number of planes that will be flown by the Operation Snowbird sorties. Nor is a number provided of the total number of other planes being flown from DM. Finally, no estimate is given for the number of these planes, both Operation Snowbird as well as other DM flights, flying over the city after takeoff or on their approach to landing.

Because of this lack of information, there is no basis for determining whether the commitment made by Brig. Gen. Kelley in 1978 will be adhered to or not under the preferred Operation Snowbird alternative. This is a deficiency that should be corrected.

10/4/2012 DATE

ATTN: OSB EA COMMENT SUBMITTAL 355th Fighter Wing Public Affairs 3180 S. First Street Davis-Monthan AFB, AZ 85707

Dear Sirs:

I am sending you my comment regarding the Draft Environmental Assessment on Operation Snow Bird, which was released on July 31, 2012. The conclusion of your draft is a Finding of No Significant Impact. I will attach my personal impacted experiences at the end of this letter.

The draft is extremely long, and almost impossible to understand everything in it. But since we live close to the DM AFB runway, we are very affected, even now, which we see that you admit. Yet you say there will be no significant impact, even if you double the flights and add night flights. I strongly disagree with this finding.

I will site a few things for your consideration:

1. We definitely have an Environmental Justice problem in this area. You state in your cover letter lines 47-49: "There would be no additional disproportionately high and adverse impacts on minority and low-income populations near DMAFB compared to those impacts associated with No Action Alternative." If you change nothing, we are still impacted and will continue to be more impacted because you keep bringing in more loud and more dangerous aircraft right over us without our permission and with no regard to our safety and wellbeing. And if you bring in more aircraft, or double the aircraft and add night flights, we will actually be extremely, significantly impacted.

2. Your EA does not investigate reasonable alternatives for basing the OSB elsewhere, even though in an EA you may not be required to do that; therefore an EIS is needed to thoroughly investigate other possible locations in less encroached areas, and to give a better

report on the actual aircraft you desire, which you have left out many in this EA, and provide true noise levels, not computerized models of noise levels.

3. Your EA has very misleading and even false information in it. You do not state the effects on the actual neighborhoods closest to DMAFB, and mid-town Tucson. You chose to talk more about the southeast end of the runway, which is not encroached, and you talk about downtown Tucson, who is not in the flight path. The most impacted people are in the flight path, and accidental potential zones, and the circling of planes all over Tucson.

4. Your EA talks about adding night flights. You already fly late at night, early in the morning right after midnight, and even early in the waking hours. And this is only night time, daytime is even worse. You want to add night flights saying that it won't bother people because "human activity may be more relaxed." (Quoting pages 3-2, line 5 & 6). Most people are sleeping, and the planes that are so loud, wake us up and frighten us, and other people work at night and will also be affected.

There are numerous things to be said about the inadequacy of this EA report. A TRUE EIS is required and requested.

I request a copy of your final decision on this EA, please send it to me at my mailing address, or at least by e-mail.

Thank you for your time, and now I will attach separately my own personal experiences proving to you that I am impacted by the DMAFB aircraft even now, and continue to be and will continue if you add any number of aircraft.

Sincerely,

Dana Jut

Printed Name: DIANA Contract Dr #2 Address: 3837 E. Technical Dr #2 TUCSON, AZ 857/3 Printed Name: DIANA Jarrett

10/4/2012

These are my personal comments attached to the letter:

I live directly in the flight path of All planes that go to DM, early this year I noticed Some planes flying over that not only made my little home vibrate but my body as well on other occassions my dog has been scared by the noise, she has nun to find cover under the Bed, I have been autside doing Laendry when these planes have passed I've had to plugg my ears so hard to try to densen the sound, Because we live in an area that people may Consider not to be up scale, we are taken advantage of its simply not fair we pay takes and vote Just like everyone else, but it seems as though we are passed off as nobodys, well this Nobody is specking up and so are others in the area something Must be done, we are certainly not against the Military in anyway, but our lives are being affected everyday by these planes, so an impact on us all has depirally oakured, don't Dury your Madin the Sand because WE THE PEOPlE WILL MAKE ASTAND ! For what's right.

Dirlat

DIANA Jarreft 3837 E. Technical Dr #2 TUGSON, AZ JSTIZ September 7, 2012

355th Fighter Wing Public Affairs Office Attn: ACC/A7P 3180 S. First Street Davis-Monthan AFB, AZ 85707

Dear Sirs:

We are writing in response to the draft Environmental Assessment for Operation SnowBird [OSB EA] operating out of Davis-Monthan AFB. The concerns we outline below, among others, mandate that the Air Force conduct a full, unbiased, Environmental Impact Study on the proposed expansion of Operation SnowBird. The results of this EIS should be used to realign the mission of Davis-Monthan AFB to be more compatible with its urban embedded location.

Our neighborhood, El Encanto which we represent, is one of the oldest neighborhoods in Tucson, so our homes were built long before DM started the SnowBird program. We value DM AFB's presence in Tucson, but would like its mission to take into account the fact that it is embedded in a community of nearly one million persons, and understand the full environmental impact of this embedding, mitigating that impact as appropriate. Thus, we are not in agreement with the finding of no significant impact [FONSI] from the proposal to more than double the number of flights participating in OSB, including more foreign aircraft and more, noisier domestic aircraft than is currently the case. We detail some of the reasons below, and request that a full Environmental Impact Study [EIS] be undertaken so that the true environmental impact on the Tucson community and its surroundings will be correctly assessed.

Overall, the document minimizes the effect on the residents of Tucson of doubling the number of OSB flights. This blatantly self-serving stance is exacerbated by the choice of reference year, 2002, while the OSB program has not been subjected to an EIS or EA since 1978.

Our first specific concern is safety. The OSB EA presents no data to corroborate the few statements on safety. While the OSB, in its past mode, have no accidents to date, DM operations have had two in the last 40 years, including fatalities. Increasing the number of sorties by trainees with armed aircraft over heavily populated areas seems problematical, and requires at least a more detailed analysis. The special dangers of the OSB program are due to the fact that its pilots need practice and training, by definition.

Our second concern is noise. The noise analysis in the OSB EA omits the noisiest aircraft that the OSB program sometimes has (F-22, Harrier) in its analysis, picking instead less noisy craft, as "representative". There are almost no details on how analysis was done or what assumptions about power levels and aircraft altitudes were used. There is no comment on the disruptive effect on educational institutions, such as the University of Arizona; there is no recognition that the 24 hour noise averages include short term bursts of noise greater than 85 db.

There are also issues of environmental justice. The population most severely affected, near the northwest end of the DM runway, is primarily minority. These people are within the 75 dB, 24 hour averaged, contour, where damage is predicted, and over 130 homes will be added as a result of the proposed doubling of flights. No mitigation measures are proposed in the new plan. This violates the law, especially in maintaining the safety and rights of children. An unjust society serves no one well.

Please don't hesitate to contact us if we can provide additional information.

Very truly yours,

Frank E. Babb, President

CC: Mayor and City Council, Secretary of the Air Force, Senators McCain and Kyl, Congressman Barber, Congressman Raul Grijalva Subject: OSB EA Comment Submittal 355th Fighter Wing Public Affairs 3180 South First Street Davis-Monthan Air Force Base, Arizona 85707

Gentlemen:

The recently completed draft environmental assessment for Operation Snowbird is very disturbing for a number of reasons, but most of all because of the Finding of No Significant Impact, or FONSI. The following issues are noted, which simply, as presented, escape the reasoning of common sense:

- 1) The EA proposes to double the number of sorties and add night flights to the schedule, and yet states that the effect of these additions will be "likely imperceptible to residents". How can twice as many departures and arrivals not be noticed? How can night flights, when residents are present in their homes and children are trying to get a good night's sleep for school, not be noticed? This simply escapes reason. Once again, this conclusion is reached based on noise modeling using "averaging" over a 24 hour period. It does not reflect the reality of loud aircraft overhead at a given time. The number of loud aircraft would double, and given that, it is difficult to see how residents below the flight paths would be able to either be outside and use outdoor parks and other amenities, such as their own patios and yards, or get any sleep, night or day. This idea of noise averaging over a 24 hour period is fundamentally flawed, and is NOT, repeat NOT, a fair or valid measurement of real world noise. Noise does not occur on an average. In addition, this conclusion was further invalidated by the use of computer modeling, without actual fly-over measurements.
- 2) Regarding safety, how can one say that the safety of operations would not be affected by doubling the amount of flights? One hears almost weekly of military aircraft either crashing or having some other serious issues while in flight. Schools have had to be moved because of noise and safety concerns. Statistically, the chances of a mishap must increase with the doubling of arrivals and departures.
- 3) The Air Force does agree that the flights comprise a disproportionate negative impact on low income and minority neighborhoods, however there is no proposal or plan to mitigate that impact. In addition, there is no reference as to the negative impact on property values if flights are doubled, or if night flights are added. Instead, it is stated that there has been no loss in property value, without data to back up this claim. How can there be no loss in property value under these conditions? Again, this simply escapes reason AND logic. Property values have already been hurt by the existing flights to the extent that some properties are essentially worthless.
- 4) The EA has been written for use by ordinary citizens, yet the language used is of a technical nature which the ordinary citizen would have issues understanding. While it is appreciated that a technical subject must contain appropriate language in order to present an accurate picture, how many average citizens know that runway 12 and runway 30 refer to points on a compass, rather than an actual runway? These issues need to be explained.
- 5) What is the impact on destination tourism, trade shows (the gem and mineral show, for instance), and conferences? Has an objective economic analysis been done? If so, where is it? It has been stated quite adequately that tourists have not complained about the noise of the jet aircraft. Of course not! They simply don't return. They go where they can have peace and quiet to enjoy their vacations. "Negligible Impact" is simply not an adequate impact OR economic statement.
- 6) Why are there no public hearings scheduled to air concerns? Had a full EIS been completed, these hearings certainly would have taken place. You ask for public involvement. It appears to this writer that just the opposite is taking place: Public involvement is being squelched. Citizens with real concerns are not shy to step up before their peers and media and publicly air those concerns.

In conclusion, this EA is simply inadequate, for many reasons, to address the real concerns of the citizens affected by the proposed OSB profile. The further one looks, the more issues surface. Lacking a full EIS process with adequate public hearings for comment, this writer must simply conclude that no real effort has been made have a frank, honest conversation with the citizens and communities affected, thereby rendering this entire process invalid.

Sincerely Yours,

Gáry H. Ashberger 259 West Calle Evelina Tucson, Arizona 85706 Email: ashandmagee@msn.com August 24, 2012

2606 E. Drachman Street Tucson AZ 85716 September 12, 2012

ATTN: OSB EA Comment Submittal 355th Fighter Wing Public Affairs 3180 South First Street Davis-Monthan AFB, AZ 85707

Sirs:

Section 1.2 of the draft Operation Snowbird Environmental Assessment indicates that EAs in 1995 and 1999 had analyzed the environmental impacts of the flights of OSB aircraft. In fact, neither EA provided such an analysis; the two EAs considered only the impacts of constructing facilities on the ground.

Section 1.2 states, "The 1995 EA and associated Air Force memoranda indicated that the number of National Guard units participating in OSB training at DMAFB ranged from 13 to 15 annually and that the OSB was no longer considered a 'wintertime' only mission." This is a simple statement of fact. It is not an environmental analysis, and it provides no justification under the National Environmental Policy Act for expanding OSB to 13 or 15 National Guard units, or for expanding OSB beyond wintertime operation.

Section 1.2 states the 2002 CSAR EA "included analysis of OSB activities." Section 1.4 states the CSAR EA "had tangentially analyzed OSB sorties." Section 2.3 states OSB aircraft were "analyzed in the 2002 CSAR EA." All three of these statements are false. The CSAR EA included no analysis of OSB aircraft. As Section 2.3 notes, the CSAR EA acknowledged OSB aircraft only by including them in its Table 2.3-4 as "Other" aircraft. This obscure note in a table of sorties does not constitute an environmental analysis.

The Air Force is fully aware that the 1995, 1999, and CSAR EAs provided no analysis of OSB aircraft or operations. The undersigned pointed this out in a letter submitted to the Air Force during the scoping phase of the current EA.

The Air Force is dishonest to indicate in the current EA that any of these three prior EAs had included an analysis of OSB aircraft.

Section 1.2 refers to an OSB EA that was completed in 1978. In fact, this is the only analysis the Air Force has ever made of the environmental impacts of OSB aircraft.

In the words of the 1978 EA, it would "enable northeastern Air National Guard units to deploy to Davis-Monthan AFB, AZ, with sufficient equipment and personnel to conduct deployed tactical training/operational readiness inspections for two week periods basically between the months of January through April." The EA covered "an average of twenty sorties a day during weekdays . . . conducted during normal duty hours at Davis-Monthan AFB, 0800 – 1700." Aircraft covered by the EA were the A-7 and F-100, with the A-10 replacing the F-100 after FY 79.

This is the baseline that the Air Force must use.

During the scoping phase of the current EA, the Air Force recognized that it must use a baseline that is supported by an earlier environmental assessment. At that time, the Air Force proposed to use the CSAR EA as its baseline. In the words of the Air Force, the CSAR EA is "the assessment OSB currently operates under."

Members of the public pointed out the CSAR EA included no analysis of OSB. Now the Air Force has changed its mind; it has decided to use a baseline that has never had an environmental analysis.

The Air Force intends to use 2009 as its baseline. The sole justification for this baseline is that it is "representative" of current OSB operations. The Air Force ignores the fact that current operations have not been subjected to an environmental analysis, and violate the National Environmental Policy Act.

Operations that violate NEPA cannot be used as a baseline. Operations that have never had an environmental analysis cannot be used as a baseline.

The Wyle Study, which was commissioned by the Air Force and which is the predecessor of the current EA, states on page 55 that the 1978 EA is "the prevailing EA."

On page 52, the Wyle Study elaborates:

... [T]he mission, the number of operations, and the types of aircraft in Operation Snowbird have changed substantially since development of the EA in 1978. ... [T]he training has evolved from winter deployment training for the Cold War era to year-round pre-deployment training exercises. ... Other significant changes include: none of the original aircraft in the EA are currently involved in OSB; the number of days OSB aircraft are projected to be at DM has risen from two weeks to one month or longer; the number of operations has, in some years, doubled; night time operations have been added; the limitation of flight operations to one arrival and departure with no pattern operations conducted has been inconsistently accomplished or documented since 1978; and on-base aircraft maintenance run-up operations have likewise been accomplished and documented. In short, there have been significant changes in OSB's mission, training and aircraft operations since the 1978 EA was released. [Emphasis added.] The Wyle Study makes it clear that a 1978 baseline must be used. OSB was last analyzed in 1978, and 1978 is the only defensible baseline.

With a 1978 baseline, the current EA must analyze its proposed alternatives in light of the encroachment upon D-M of residential and commercial areas since 1978; the greater density of surrounding neighborhoods that has resulted from the construction of apartments, schools, and medical facilities since 1978; the increase in arrivals and departures, as well as the different types of aircraft, at Tucson International Airport since 1978; the change in Tucson's air quality since 1978; and many other factors.

To ensure the final decision regarding Operation Snowbird will withstand potential legal challenges, the current analysis must use the 1978 EA as its baseline. Further, a proper analysis of all operations not covered by the 1978 EA can be accomplished only with an Environmental Impact Statement.

Sincerely,

Gary A. Hunter Resident of Midtown Tucson Attn: OSB EA Comment Submittal 355th Fighter Wing Public Affairs 3180 S. First St. Davis-Monthan AFB, AZ 85707

August 22, 2012

We are writing to you regarding Davis-Monthan's **Operation Snowbird**. We ask you to conduct a full environmental impact statement as well as public hearings to discuss the expansion of Operation Snowbird. We are opposed to the expansion of the number of flights as well as to the evening flights. We live in a Northwest Tucson foothill neighborhood. Even with the current number of flights, the noise generated is a disturbance when we are outside in our yard. The expansion of the number of flights will make the noise even worse and we are opposed to your taking such action. We implore you to do another noise and environmental impact study and make the results public.

Thank you, Geoffrey and Linda Goldsmith

4840 N. Avenida De Vizcaya Tucson, AZ 85818

File: Operation Snowbird Davis Monthan AFB



3600 E. 36th Street Tucson, AZ 85713

September 12, 2012

355th Fighter Wing Public Affairs Office Attn: ACC/A7P 3180 S. First Street Davis-Monthan AFB, AZ 85707

Dear Sirs:

I am writing on behalf of Horizon Moving Systems, and all of our employees and owners. We are in complete agreement with the FONSI conclusion of the draft Environmental Assessment of the enhanced mission for "Operation Snowbird" (OSB EA) released in July 2012. While we understand and agree with the EA finding, the analytical analysis used to establish the preliminary "Finding of No Significant Impact" and the language used in the Report could be improved.

The Report language states that the Air Force's preferred alternative proposal is to increase sorties by nearly twice the low level of 1,190 per year. This looks to the public like a doubling of flights. In fact, we suspect it is merely the "maximum potential sorties" and not a foregone intention to necessarily expand the mission to that number. It is therefore suggested that the Air Force enhance the Draft Report to include expanded explanations of the apparent intention to return OSB operations to nearly its highest historical level of sorties (if that really isn't an intention or plan, but rather merely the highest potential level that might occur given past experience). Also, better explanations would be beneficial for the aircraft types, numbers, and methodology used for noise analysis; a copy of the referenced 2007 noise study used as a basis of this report; and an explanation of the methodology used for the safety analysis in the Report.

The 162nd Fighter Wing's "Operations Snowbird" at DMAFB is broadly supported by the greater Tucson population. Horizon Moving Systems believes the "Finding of No Significant Impact" is correct and the conclusion of the EA is therefore fully supported and entirely justified.

Sincerely.

Bruce L. Dusenberry President

cc: Gen Hostage, ACC/CC Lt Gen Rand, 12AF/CC Col Blanchard, 355 FW/CC Col McGuire, 162 FW/CC

September 12, 2012

Regarding: OSB EA COMMENT SUBMITTAL

To Whom It May Concern,

I was **not** given any notice from you of this proposal to increase Operation Snowbird flights. I've talked to my neighbors and they never receive any notice of this proposal either. I only found out about it through word of mouth from a friend. So the neighborhoods that would be mostly affected by this proposal have not been notified. Why?

My family has lived in this neighborhood since the early 1960's. I have a four year old son that likes to be outside. He is quite frighten when a F-16 flies the touch and go circle above our house. They are so loud and just plain scary flying so, so low over our house. The airplanes flying overhead have significantly increased over the years and they keep getting louder and faster. Enough is enough, and this is way too much air traffic noise for any residential neighborhood to bare. And wanting to increase Operation Snowbird is insane. I am totally against the Operation Snowbird and Search and Rescue programs here at Davis-Monthan Air Force Base. I feel there are other bases or areas that can support these programs that are not in a highly populated area like Tucson, AZ. Have you thought of alternative sites for these programs like; The Gila Bend Auxiliary Field in Gila Bend, Pinal Air Park in Marana, Libby Field in Sierra Vista, and/or others? It could then be a win-win situation for everyone if these programs were moved to fields with little urban development and would put citizens at low or no risk.

Sincerely,

J. Hare 4519 E. 24th Street Tucson, Arizona 85711 520 881-7124 Retired 220 East Drachman Street Tucson, AZ 85705

> Attn: OSB EA Comment Submittal 35th Fighter Wing Public Affairs 3180 South First Street Davis-Montham AFB, AZ 85707

> > September 12, 2012

To Whom It May Concern:

I am writing concerning the draft environmental assessment of your plan to expand the National Air Guard training program and the fact that you have refused to hold public meetings concerning the same. This does not surprise me in the slightest, as these kinds of plans have met with overwhelming objections from the community at large – a fact that I believe you are well aware of.

Your proposed increase in air traffic comes at a time when the community very much wants to see a decrease in the same. The noise in our neighborhood has become almost intolerable, as it would seem more and more flights of all sorts are taking place overhead. It is easy to forget that Tucson is a major city and that the kind of programs you have and are proposing are totally destroy the quality of life for the inhabitants. There are many more concerns, including the danger to the local population and wildlife, the destruction of the tourist industry, the forcing of 'snowbirds' to seek more peaceful environments, the pollution and the possibility of you training potential enemies of the United States, among other points.

I ask you to conduct a full objective environmental impact statement, preferably by an independent body.

Sincerely,

James Condon

Richard Oseran <rsoseran@theriver.com> F-35 September 10, 2012 10:45 AM

I strongly oppose the operation of the F-35 aircraft or any aircraft louder then the A-10 from operating in the Tucson Community. The urban core contains a major university with 40 thousand students, elementary schools, Churches, and a major Hospital. Loud noise is a detriment to learning, quite worship, healing and health.

My two complaints are noise and safety. The dense population under the flight pattern must be considered because all who live or frequent the area on a daily basis are at risk. We have evidenced this safety hazard in the past when a military aircraft crashed on Sixth street.

These aircraft would be better located flying outside heavily populated areas. Their impact on the urban quality of life is unacceptable.

Janet Oseran

Jamb Com

ATTN: OSB EA COMMENT SUBMITTAL 355th Fighter Wing Public Affairs 3180 S. First Street Davis-Monthan AFB, AZ 85707

Jeff Ingram

Name Date E-Mail Address Mailing Address August 27 2012 not available

3956 E. Camino de la Colina, Tucson AZ 85711 Comment on DRAFT ENVIRONMENTAL ASSESSMENT FOR THE PROPOSED UPDATE AND IMPLEMENTATION OF THE NATIONAL GUARD BUREAU TRAINING PLAN 60-1 IN SUPPORT OF OPERATION SNOWBIRD DAVIS-MONTHAN AIR FORCE BASE, ARIZONA

The Draft E.A. is an inadequate analysis of the impacts of Operation Snowbird. The following points are copied from the draft FONSI:

14 15Other Alternatives: Alternatives to relocate OSB to other installations were posed by several 16 comments during the scoping process, including the Gila Bend Auxiliary Air Field, Libby Army 17 Air Field, Luke AFB, and TIA. In order to expand the infrastructure at Gila Bend Auxiliary Field 18 or Libby Army Airfield, dramatic capital improvements at those facilities would be required to 19 safely launch and recover aircraft on a permanent basis. Given the time required to plan, 20 design, and construct these expansions, an unacceptable break or delay in combat aircrew 21 training would result for the ANG and their training partners. The time required to plan, design, 22 and construct these expansions would cause an unacceptable break or delay in combat aircrew 23 training for the ANG and their training partners. Consequently, this alternative was eliminated 24 from further consideration. 25 26

Environmental Consequences: There would be no significant impacts air 27 quality under any alternative. All emissions would be well below de minimis thresholds. A slight 28 expansion to the 65-decibel (dB) and 70 dB Day/Night Level (DNL) noise contours would occur 29 for each of the three action alternatives compared to the No Action Alternative.

These two points are not supported by available information. Taken together, they constitute sufficient and necessary justification for a full EIS to be prepared on OSB operations.

Upgrading of the Gila Bend Field is already necessary and planned. An intelligent phase-in plan could smoothly and productively result in OSB operations being carried out from this field, which would

- 1. increase USAF discretion to train and fly as it wishes,
- 2. lessen negative environmental impacts on the Tucson metropolitan area,
- 3. increase, broaden, and diversify positive economic impacts on Tucson and southern Arizona generally, and
- 4 provide a healthy forward-looking basis for future planning and provision for USAF operations in this rapidly developing metropolitan area.

A plan for OSB that looks forward instead of into the past should be prepared with a complete EIS to justify a positive future for these operations.



sam hughes neighborhood association

P. O. Box 42931 • Tucson, AZ 85733-2931

September 28, 2012

355th Fighter Wing Public Affairs Office
Attn: ACC/A7P
3180 S. First Street
Davis-Monthan AFB, AZ 85707

Re: Objections to Operation Snowbird and to its expansion

Dear Sirs:

Operation Snowbird (OSB) has had an negative impact on the residential quality of life in this neighborhood for many years. Its ever-expanding operation in the airspace over this neighborhood has cost residents in terms of safety, noise, property values and social justice. The proposal to expand the program now requires an evaluation of the additional adverse impact that its expansion would have on this neighborhood. However, since OSB has expanded since its inception in 1975 without an Environmental Impact Study (EIS) or significant community involvement, the Board of the Sam Hughes Neighborhood Association (SHNA) objects to the expansion of OSB and disputes the conclusion of the draft Environmental Assessment (EA) that expansion would cause no additional impact on the neighborhood.

SHNA also believes that there are significant differences between an EIS and the EA that has been drafted. The EA has fewer procedural requirements than an EIS and offers less opportunity for public comment or involvement than an EIS. An EIS provides a more comprehensive and thorough assessment than an EA. Consequently, SHNA asserts that an Environmental Impact Study (EIS) should be prepared that uses as its baseline the 1978 EA and includes an assessment of the impact on this neighborhood of the OSB activities that reflect the current level of operations and type of aircraft flown.

Some of the serious deficits in the draft EA that preclude its use to evaluate the impact of the expanded OSB on this neighborhood are:

THE DATA IS MISLEADING AND INADEQUATE. The noise study used is based only on computer modeling with no on site noise sampling. It was never publically vetted or disclosed during the scoping meetings. The BASE OPS program used for the modeling had incomplete data in that its useable electronic data was limited to F-16, F-15, A-10, GR-4, and C-130 aircraft and did not include F-22s, F-18s, Harriers, Osprey, Tornados and the helicopters that are proposed to be used in the expanded OSB. Also, no factual data is provided to support the conclusion that only 17 additional residences to the NW of DMAFB would be affected by doubling the number of flights and adding night flights.

NOTICE IS INADEQUATE. Notices sent to the low-income and minority populations confirming the availability of the Draft EA haven't been received. The OSB Draft EA is not available in the Spanish language. USE OF NOISE AVERAGING LACKS MEANING. Single Exposure Level (SEL) has more meaning and its use to measure noise shows that at 500 ft. level of aircraft landing over the Julia Keen Neighborhood, the 15C would be 114 dB, the F-16C would be 104 dB, the F/A-18E/F would be 106 dB. Part of Reid Park would be at about the 1000 Level. The F-22 reaches SEL levels of 120-122 dB. The heavy emphasis on noise averaging (DNL) rather than SEL waters down the impact of noise on residents under the flight path.

NO ANALYSIS OF IMPACT ON TUCSON'S PRIMARY INDUSTRY. While acknowledging that tourism is important to the Tucson area economy and mentioning the public's concern about OSB's impact on the Tucson Tourism industry during the scoping meetings, the draft EA fails to analyze the impact of the expansion of OSB on tourism. With an EIS and the greater detail and public involvement that would be part of that higher level study, data could be developed that could be analyzed to determine whether OSB would have a negative impact on tourism, the City's major industry.

ENVIRONMENTAL JUSTICE. The draft EA contains insufficient data to support its conclusion that "There would be no additional disproportionately high and adverse impacts on minority and low-income populations near DMAFB compared to those impacts associated with No Action Alternative." Again, an EIS could gather data that could be analyzed to support such a conclusion. But common sense dictates that the areas near the base may have higher low-income and minority populations due to the existing impact on their environment by OSB. This raises another reason for an EIS concerning the existing OSB. It is easy to find no impact where the existing impact has already caused damage to the environment. Common sense also tells us that you can't double the number of flights and introduce night flights and have no significant impact on the quality of life and safety of the residents.

NO INVESTIGATION OF OTHER ALTERNATIVES. The draft EA fails to investigate reasonable alternatives for basing OSB. An EIS is needed to thoroughly investigate other possible locations in less encroached areas.

NO DATA TO SUPPORT NOISE MITIGATION BY USE OF RUNWAY. If the proposal to mitigate noise by directing landings and take-offs to overfly the unpopulated area southeast of the runway had merit, such mitigation would have been done for the existing program and some data would be available to support the proposal. Either a change in use of the runway has been tried under the current program with no resulting mitigation or it hasn't been done because there is no likelihood that it would provide mitigation.

In conclusion, SHNA contends that because OSB has been and continues to adversely affect the neighborhood, an EIS that uses the 1978 baseline should be prepared and submitted to the National Environmental Protection Agency (NEPA) for approval.

SHNA, Inc. John S. O'Dowd, President

September 5, 2012

355th Fighter Wing Public Affairs 3180 S. First St. Davis Monthan AFB, AZ 85707

To Whom it May Concern:

Subject: OSB EA Comment Submittal

I am writing to emphatically request that the United States Air Force carry out a full, objective environmental impact statement of its plans to expand flight operations at Davis-Monthan Air Force base (DM AFB). I live and work directly beneath the northern approach flight path of DM AFB and am already affected by the continuous aircraft noise. As you are well aware, the noise level and aviation-related air pollution resulting from F-16s, F-22s, F-35s and other similar aircraft is not comparable to commercial aircraft. As one of the many affected residents I am deeply concerned that Operation Snowbird plans, which will increase the number of flights from 1,190 to 2,256 per year, will only exacerbate these adverse impacts.

It is unconscionable that the Air Force would proceed with expansion without considering the opinions of Tucson residents affected by the increase in flight training, night flights, or louder jets over their homes. Your plans will greatly affect the quality of life not only of residents living directly within the flight paths of your expanded program, but of all Tucsonans due to the increased noise, air pollution, and safety concerns. Furthermore, our hospitality and tourism related economy is likely to be negatively affected by the increased noise; for most people the sounds of fighter jets are reminiscent of war zones – not holidays.

The planned expansion will have disturbing repercussions for our community and it is clear that the draft environmental assessment carried out by the Air Force is both incomplete and lacks engagement with affected public and concerned citizens. If the United States Air Force is committed to being a good neighbor you will provide a complete environmental impact statement and hold public meetings prior to this expansion of operations at DM AFB.

Sincerely,

mere

Kerti Jean Ormerod

Laurel Bellante 3649 E. Fairmount St. Tucson, AZ 85716

September 5, 2012

355th Fighter Wing Public Affairs 3180 S. First St. Davis Monthan AFB, AZ 85707

To Whom it May Concern:

Subject: OSB EA Comment Submittal

I am writing to request that the Air Force carry out a full, objective environmental impact statement of its plans to expand the National Air Guard training program (Davis-Monthan's Operation Snowbird). As a Tucson resident living within the Air Force flight pattern northwest of Davis-Monthan, our quality of life is already diminished due to the continuous air traffic of National Guard flights and I am deeply concerned that your plans to increase the number of flights from 1,190 to 2,256 per year will only exacerbate these impacts. It is unconscionable that the Air Force would proceed without holding meetings to discuss this expansion with the people who will be impacted by it in the Tucson community. Your plans will greatly affect the quality of life not only of residents living directly within the flight paths of your expanded program, but of all Tucsonans due to the increased noise, air pollution, and safety concerns. This expansion will have disturbing repercussions for our community and it is clear that the draft environmental assessment carried out by the Air Force is both incomplete and lacks engagement with public opinion.

I implore you to provide a complete environmental impact statement and hold public meetings to discuss this expansion.

Sincerely,

Bales

Laurel Bellante

ATTN: OSB EA COMMENT SUBMITTAL 355th Fighter Wing Public Affairs 3180 S. First Street Davis-Monthan AFB, AZ 85707

Re: 2007 "Noise Study"

It is unfathomable how you can claim in the Draft OSB EA, that the document you have finally made available to the public on your website (the Draft 2007 Data Collection Site Visit Report) is in any way, a "Noise Study".

1) There is no mention of noise measurements of any sort anywhere in the document. There is not even a column for decibels to be listed.

2) The document contains no information regarding any of the loudest aircraft that are currently flying in the OSB program (such as the Harrier, Tornado, F-22, F-18).

3) The document contains no information regarding any new aircraft that will be flying in the OSB program, if the plan proposed in the EA is implemented.

4) The document contains no information regarding the F-35, which by the AF's own admission, will be replacing all other aging fighter aircraft as they are retired from service, including those now being flown in the OSB program, which will result in the F-35 comprising part, and possibly even the majority of the cadre of OSB aircraft.

In summary, what you have released for public scrutiny is not in any way a "noise study". If there actually was a valid "noise study" done in 2007, please release that study in its entirety, in order for the public to have access to exactly what was measured, when and where the measurements were conducted, exactly which aircraft were studied, under what conditions, and the results (in decibels) for each aircraft.

Thank you,

Ms. Lee Stanfield

Lee Stanfield 09/18/12

Attn:

OSB EA Comment Submittal

I have lived in Tucson for nearly 25 years and the noise of the Air Force jets has always bothered me a great deal, but every year it seems to get worse. When I am in my backyard and the jets go over my house at times they are so loud that I can't hear a person talking who is standing right next to me. Now that I am retired I spend the majority of my day gardening, relaxing, playing music, and doing extensive home repairs, so much of my day is spent outdoors, even in summer. Obviously the jet noise is much greater outside. The noise level generated by the current F-16's already hurts my ears, even with ear plugs, and greatly reduces the quality of my life. I can't imagine living here with even louder planes and many more flights. I have spend 25 years creating a lush garden out of a bermuda yard. It has extensive drip irrigation and low water use features and mature trees forty feet high. There is no way I can move and ever recreate what I have spent years doing here.

It is intolerable that my government in this case, the Air Force, would force this expansion upon us tax payers without even giving us a decent hearing or a realistic assessment of the human costs the Air Force proposes. This isn't Russia--we don't live under Putin's thumb! We expect our government, including the Air Force, to seriously weigh the effect of their actions against the citizens they are supposedly here to protect. This draft assessment is a sham--you need to seriously look at the effects your proposal to expand Operation Snowbird will have on our safety. noise pollution, and economic well being. Instead of being good for Tucson's economy, it will damage our tourist industry as well as discourage the type of high tech development our city needs, not to mention the further devastation it will bring to property values and quality of life for people living in the neighborhoods near the planes. That is not a small area as the Air Force contends with their self selected parameters, but extends well into the U. of A. area and encompasses a large part of central Tucson.

This whole expansion proposal should be dropped, but that probably is expecting too much common sense and human decency. At the very least we should be given an objective environmental impact statement that completely and honestly discusses what these proposed changes would mean to the central area of Tucson. The current draft assessment is totally inadequate for that task and has to be redone as a serious document, not a sham!

Thank you for your time--sincerely yours, Linda Phelan



Arizona Department of Environmental Quality

1110 West Washington Street • Phoenix, Arizona 85007 (602) 771-2300 • www.azdeq.gov



Henry R. Darwin Director

Janice K. Brewer Governor

August 30, 2012

ATTN: OSB EA COMMENT SUBMITTAL 355th Fighter Wing Public Affairs 3180 S. First Street Davis-Monthan AFB, AZ 85707

Re: Operation Snowbird Environmental Assessment

Thank you for the opportunity to comment on the Environmental Assessment for Operation Snowbird to expand the operations of the Air National Guard's 162nd Fighter Wing. The Arizona Department of Environmental Quality, Water Quality Division (ADEQ) appreciates the opportunity to assist in the review. After reviewing the Environmental Assessment, ADEQ does not see any impact related to water quality in Arizona.

If you need further information, please contact Wendy LeStarge of my staff at 602.771.4836 or via e-mail at wl1@azdeq.gov, or myself at 602.771.4416 or via e-mail at lc1@azdeq.gov.

Sincerely,

Linda Taunt, Deputy Director Water Quality Division

Southern Regional Office 400 West Congress Street • Suite 433 • Tucson, AZ 85701 (520) 628–6733

Printed on recycled paper

August 30, 2012

ATTN: OSB EA COMMENT SUBMITTAL 355th Fighter Wing Public Affairs 3180 S. First Street Davis-Monthan AFB, AZ 85707

Dear Sir or Madam,

Thank you for inviting comments from the public and considering the voices of the people who are directly affected by your institutional decisions.

My belief is the United States of America spends way, way too much on militarization and the outcome of our current bloated military industrial complex is that we are made less safe rather than safer. I urge you (yes, you <u>personally</u> as well as your unit, and everyone who is conscious) to do all in your/our power to curtail the "defense" expenditures and redirect those tax dollars into local projects that promote and affirm life.

If you insist on this military and economic madness, please site your military machines away from Tucson, Arizona. It breaks my heart that my country prefers to invest in aggression rather than fund sustainability projects that feed, house, educate, and prepare citizens for a future dramatically impacted by climate change, peak oil, and crashing global economies.

Many hile langs m decampe q

Thank you, Mary DeCamp 1017 E. Knox Drive Tucson, AZ 85719

(520) 250-9832

"Every gun that is made, every warship launched, every rocket fired signifies, in the final sense, a theft from those who hunger and are not fed, those who are cold and are not clothed. The world in arms is not spending money alone. It is spending the sweat of its laborers, the genius of its scientists, the hopes of its children... This is not a way of life at all, in any true sense. Under the cloud of threatening war, it is humanity hanging from a cross of iron." Dwight D. Eisenhower, Former U.S. President, April 16, 1953

"I never intend to adjust myself to economic conditions that will take necessities from the many to give luxuries to the few. I never intend to adjust myself to the madness of militarism..." MLK Jr. January 1968

2704 E. Drachman St. Tucson, AZ 85716 September 10, 2012

Attn: OSB EA Comment Submittal:

I can't believe that the Air Force proposes to almost double the number of flights operating under Operation Snowbird while using much louder planes, and yet maintains that these changes are minimal and do not warrant a full, objective environmental impact statement. It is absurd that the Air Force should take this position as well as morally and intellectually dishonest. Obviously such changes as the ones you propose will effect significant numbers of people in Tucson.

They will certainly impact our safety--the Air Force said decades ago, after they crashed a jet and "cremated" two people in a VW bug just a block from the U of A campus and crashed into a supermarket next to Reid Park, that they would restrict their flights over our increasingly urban city. It has not happened--Air Force promises are just empty words that are forgotten as soon as the uproar dies down and the business community starts counting their cash. The safety analysis D-M presents for Operation Snowbird aircraft is totally inadequate. The methods that were used for the determination are largely hidden and have not been subject to public review. Nor is it at all evident that the risk factor captures the full picture of the aircraft-safety record--some types of planes are not included and previous accident records are ignored. What are you going to do--wait until a D-M / Snowbird jet takes out 5000 people at a U of A game, or five hundred students on the U. of A. mall, or only a few hundred shoppers at El Con?

That financial impact should also be subject to serious questioning. The amount of noise from Air Force jets just gets louder and louder. Do you really think that doesn't effect tourism in a substantial way. Do you think that the real snow birds that come to Tucson for a few weeks or months want to rent apartments and homes where they are constantly bombarded by the sound of screaming jets? Now you want to double the flights with noisier planes and claim it has minimal economic impact. This is so obviously wrong that it is totally dishonest to claim otherwise.

There has to be an honest assessment of the economic impact this proposed change will impose on the people who live in central Tucson--not those who live in Tanque Verde, Oro Valley, or Catalina Foothills. If you really need this land for national security interests, you should buy up the whole area from Golf Links to Speedway between Alvernon and 4th Avenue. Of course that is not economically feasible for the Air Force, especially when you can so easily force the economic and social burdens on the people who live there. Some of us have lived here for over 40 years and listened to endless assertions that we should just move if we don't like the costs to our hearing, threats to our safety, decreases in the value of our homes, and reductions in our quality of life. We were here before your screaming jets were on some drawing board and yet bit by bit, year by year the Air Force is sucking life out of central Tucson. So much for defending us--instead, you are destroying us!

It seems at the very least you should present us with full, objective environmental impact statement that honestly discusses and accesses what these proposed changes would mean to large numbers of Tucsonans. It is insulting and degrading to say that this current document is an honest assessment of what you propose to change in Operation Snowbird. You need to tell us and yourselves what these proposals will really mean to our lives.

Sincerely, Mout Womach

Mort Womack

DATE: Octubre 4-2012

ATTN: OSB EA COMMENT SUBMITTAL 355th Fighter Wing Public Affairs 3180 S. First Street Davis-Monthan AFB, AZ 85707

Dear Sirs:

I am sending you my comment regarding the Draft Environmental Assessment on Operation Snow Bird, which was released on July 31, 2012. The conclusion of your draft is a Finding of No Significant Impact. I will attach my personal impacted experiences at the end of this letter.

The draft is extremely long, and almost impossible to understand everything in it. But since we live close to the DM AFB runway, we are very affected, even now, which we see that you admit. Yet you say there will be no significant impact, even if you double the flights and add night flights. I strongly disagree with this finding.

I will site a few things for your consideration:

1. We definitely have an Environmental Justice problem in this area. You state in your cover letter lines 47-49: "There would be no additional disproportionately high and adverse impacts on minority and low-income populations near DMAFB compared to those impacts associated with No Action Alternative." If you change nothing, we are still impacted and will continue to be more impacted because you keep bringing in more loud and more dangerous aircraft right over us without our permission and with no regard to our safety and wellbeing. And if you bring in more aircraft, or double the aircraft and add night flights, we will actually be extremely, significantly impacted.

2. Your EA does not investigate reasonable alternatives for basing the OSB elsewhere, even though in an EA you may not be required to do that; therefore an EIS is needed to thoroughly investigate other possible locations in less encroached areas, and to give a better
report on the actual aircraft you desire, which you have left out many in this EA, and provide true noise levels, not computerized models of noise levels.

3. Your EA has very misleading and even false information in it. You do not state the effects on the actual neighborhoods closest to DMAFB, and mid-town Tucson. You chose to talk more about the southeast end of the runway, which is not encroached, and you talk about downtown Tucson, who is not in the flight path. The most impacted people are in the flight path, and accidental potential zones, and the circling of planes all over Tucson.

4. Your EA talks about adding night flights. You already fly late at night, early in the morning right after midnight, and even early in the waking hours. And this is only night time, daytime is even worse. You want to add night flights saying that it won't bother people because "human activity may be more relaxed." (Quoting pages 3-2, line 5 & 6). Most people are sleeping, and the planes that are so loud, wake us up and frighten us, and other people work at night and will also be affected.

There are numerous things to be said about the inadequacy of this EA report. A TRUE EIS is required and requested.

I request a copy of your final decision on this EA, please send it to me at my mailing address, or at least by e-mail.

Thank you for your time, and now I will attach separately my own personal experiences proving to you that I am impacted by the DMAFB aircraft even now, and continue to be and will continue if you add any number of aircraft.

Sincerely,

Address: 1804 5-30th. Pl. Address: 1804 5-30th. Pl. Address: 1804 5-30th.

E-Mail Address:

octube 4- 2012

These are my personal comments attached to the letter:

Es my estresante el jeed Lada que pasa en avion la casa tiempla el piso esto con quietos y el techo ya lo twe que orregler en la noche me des piertan y normalmente endo con de lor /de El salir a Caminor al porque malesto el Ruido el habler p telifono se tiene que contro la Comunication husto que para el avior y deja de haren niedd ex necessorio que considered al ser desection y consideration no Todo ex Negocir: Benthe Carlinger No Rberta Santiago 1804 5. 30th. pl TUCSON, AZ 85713 P. S. Además Sieurpre en Casa estos Cansada agotada X no predo respira bien & avando Estos en otros degores al norte es diferente.

ARIZONA INN

To: Brigadier General D.C. Howe Air Combat Command ATT: OSB COMMENT SUBMITTAL 355th Fighter Wing Public Affairs 3180 S. First Street Davis-Monthan AFB, AZ 85707

From: Patty Doar Arizona Inn 2200 East Elm Street Tucson, AZ 85719 T: (520) 325-1541 E: pdoar@arizonainn.com

September 9, 2012

Dear Brigadier General Howe:

After reviewing the draft OSB Environmental Assessment for the proposed expansion of the National Air Guard training program for US and foreign pilots (Operation Snowbird) at Davis Monthan, I am writing to express my objection to the proposed OSB expansion as it is represented in the current Assessment and to request an Environmental Impact Statement before such a program is contemplated.

The current Environmental Assessment (EA) concludes that there will be no significant impact on the surrounding community in spite of doubling the number of flights and allowing night flights. This EA not only omits many areas in Tucson that will be affected by the flights, it also omits many of the kinds of the loudest aircraft that will be flying. Noise and safety impacts are not accurately measured or adequately defined. In addition the report is confusing, highly technical, often misleading, and almost impossible for the general public to understand. Also, because the time frame for response has been so short, the community has had almost no time to consider and comment.

Therefore I submit these concerns to you in the deep conviction that we are owed a complete Environmental Impact Statement before the proposed expansion can be responsibly considered. I hope and trust that you will support the long tradition of mutual cooperation between the city and the Air Force by responding positively to these concerns and allow us a decent EIS for a matter of such importance to the Tucson community.

Sincerely. Patty Doar Patty Doar

Paul Rosado 2610 E Croyden St Tucson, AZ 85716 (520) 325-7337

September 13, 2012

ATTN: OSB EA Comment Submittal 355th Fighter Wing Public Affairs 3180 S. First Street Davis-Monthan AFB, AZ 85707

Sir:

I live in the Broadmoor Neighborhood and military flight operations fly overhead. I have reviewed the ENVIRONMENTAL ASSESSMENT FOR THE PROPOSED UPDATE AND IMPLEMENTATION OF THE NATIONAL GUARD BUREAU TRAINING PLAN 60-1 IN SUPPORT OF OPERATION SNOWBIRD DAVIS-MONTHAN AIR FORCE BASE, ARIZONA. I don't think any of the four Alternatives to continue military flight operations over the densely populated city of Tucson are viable.

The conclusion of this Environmental Assessment is a Finding Of No Significant Impact from the Snowbird operations preferred alternative. It's implausible to me that doubling the number of flights resulted in a finding of "No Significant Impact". In reality, the increase of 1,100 flights greatly increases the noise and the frequency in which the noise occurs.

Currently, it seems like aircraft is flying over constantly; beginning earlier in the morning and ending later into the evening. I have observed aircraft flying overhead as early as 0500 hours and as late as 2230 hours. And, these sorties occur everyday of the week. Expanding military flight operations over residential areas to the hours of 2200 to 0700 is unacceptable.

I am also skeptical of the noise contours. The contours reference an average decibel measurement over a 24 hour period. In reality, what takes away the quiet enjoyment of our property is the short duration of louder noises and at frequencies (Hz) that cause windows to rattle and conversations to be disrupted. The sound pressure levels should be re-taken in the affected neighborhoods and include the frequency (Hz) spectrum that most effects human hearing. And, because the human ear is not equally sensitive to all sound frequencies (Hz), the new measurements should include levels that effect maximum human sensitivity and be factored more heavily into the findings.

The ability to enjoy one's property without disturbance is a key factor in determining property values. If the disturbance increases, and becomes intolerable, then it seems to any reasonable person, that property values would be negatively impacted. The EA claims there would be no impact on property values with any of the alternatives. This may be true with vacant land and industrial properties in the study area, but the EA makes no mention of surveys with homeowners, real estate brokers, and real property appraisers on how it would affect the most important investment to households – the owner occupied single family residence. I did not see any broker opinions of value, appraisals or surveys from credentialed real estate professionals in the EA. Any opinions about future real property values in the EA are not credible. The property value portion of the EA should be re-studied by qualified real estate professionals using their acceptable practices.

As I understand it, the first year for Operation Snowbird deployments was in the year 1975.

OSB EA Comment Submittal 9/13/12 Page 2 of 2

Fifteen units were deployed that year as a winter month training mission for our cold weather pilots to come and continue to train at Davis-Monthan Air Force Base. Over the years it has expanded to what is now a 12 month operation.

I have lived in this same area all my life. In the early 1960's and 1970's we knew that we would have military flight operations in the midtown Tucson area and we accepted those air traffic volumes. But, it seems that DMAFB has been encroaching on our airspace by increasing the number of sorties over the years.

To those who say this is the sound of freedom, let me remind them that the noise is produced by aircraft used for war deployment. The noise is the same that the enemy hears before it is attacked. It is threatening and intimidating and we are subject to it everyday.

A better alternative, discarded in the EA, would be to decrease military flight operation over the metro Tucson area and move these sorties to a newly constructed base in Southern Arizona that is away from densely populated areas. This Alternative was wrongly discarded. The EA makes no proposal to disperse flight training to other military installations while a new military flight operations base was being constructed.

Lastly, the EA creates a tension between truth-seeking and professional advancement. I argue that these incentives create a bias toward making predetermined decisions in favor of results that may not be true.

Sincerely.

Paul Rosado

Copies: The Honorable Steve Kozachik, City of Tucson Council Member Ward 6 His Honor the Mayor, Jonathan Rothchild The Honorable Bruce Wheeler, Arizona State House of Representatives, LD10 The Honorable David Bradley, Arizona State House of Representatives, LD10 The Honorable Ramón Valadez, Pima County Board of Supervisors The Honorable Ron Barber, US House of Representatives, CD2 The Honorable John McCain, US Senate

DATE: 10-3-12

ATTN: OSB EA COMMENT SUBMITTAL 355th Fighter Wing Public Affairs 3180 S. First Street Davis-Monthan AFB, AZ 85707

Dear Sirs:

I am sending you my comment regarding the Draft Environmental Assessment on Operation Snow Bird, which was released on July 31, 2012. The conclusion of your draft is a Finding of No Significant Impact. I will attach my personal impacted experiences at the end of this letter.

The draft is extremely long, and almost impossible to understand everything in it. But since we live close to the DM AFB runway, we are very affected, even now, which we see that you admit. Yet you say there will be no significant impact, even if you double the flights and add night flights. I strongly disagree with this finding.

I will site a few things for your consideration:

1. We definitely have an Environmental Justice problem in this area. You state in your cover letter lines 47-49: "There would be no additional disproportionately high and adverse impacts on minority and low-income populations near DMAFB compared to those impacts associated with No Action Alternative." If you change nothing, we are still impacted and will continue to be more impacted because you keep bringing in more loud and more dangerous aircraft right over us without our permission and with no regard to our safety and wellbeing. And if you bring in more aircraft, or double the aircraft and add night flights, we will actually be extremely, significantly impacted.

2. Your EA does not investigate reasonable alternatives for basing the OSB elsewhere, even though in an EA you may not be required to do that; therefore an EIS is needed to thoroughly investigate other possible locations in less encroached areas, and to give a better report on the actual aircraft you desire, which you have left out many in this EA, and provide true noise levels, not computerized models of noise levels.

3. Your EA has very misleading and even false information in it. You do not state the effects on the actual neighborhoods closest to DMAFB, and mid-town Tucson. You chose to talk more about the southeast end of the runway, which is not encroached, and you talk about downtown Tucson, who is not in the flight path. The most impacted people are in the flight path, and accidental potential zones, and the circling of planes all over Tucson.

4. Your EA talks about adding night flights. You already fly late at night, early in the morning right after midnight, and even early in the waking hours. And this is only night time, daytime is even worse. You want to add night flights saying that it won't bother people because "human activity may be more relaxed." (Quoting pages 3-2, line 5 & 6). Most people are sleeping, and the planes that are so loud, wake us up and frighten us, and other people work at night and will also be affected.

There are numerous things to be said about the inadequacy of this EA report. A TRUE EIS is required and requested.

I request a copy of your final decision on this EA, please send it to me at my mailing address, or at least by e-mail.

Thank you for your time, and now I will attach separately my own personal experiences proving to you that I am impacted by the DMAFB aircraft even now, and continue to be and will continue if you add any number of aircraft.

Sincerely, Ramona V Binauer Printed Name: RAMONA V. LINARES Address: BGYSTE 33 St E-Mail Address: TUESON, 12 85713

10-3-12

To whom it may concern! You have dane a study of your Nowever you fail to do a Study of human lives putaining to this article you that is as of we are coll and ignount. We are not We arelinage cound very well idreated. Do not tall down to us. We are your equal and ofme all we do undustand when you are coming from. De are bain here and we were already here ? Ramane V Lunar

Public Affairs Office Davis-Monthan AFB Tucson, AZ

Dear Sirs,

On review of the OSB EA several errors were found that can be resolved at no cost, to everyone's benefit and without the necessity of an EIS.

Errors

1. The 2007 noise contours depicted in the EA are inaccurate. The VFR flight contours provided to the MCRC by D.M. liaison officers are approximately one mile west and encompass many more homes than the OSB EA shows. Visual observations confirm that.

2. An FAA official on base at D.M. Art Blank or Michal Schrock asserted that over 90% of D.M.'s flights return VFR. That 90% would activate a curved APZ (80% of flights circling to land activates a curved APZ per D.M. liaison officials).

3. That curved APZ overflies three schools, apartments and a Boys' and Girl's Club in addition to Julia Keen School that was closed - unacceptable according to AF ACUS standards. No mention is made of this fact in the OSB EA.

Solutions

There are solutions to the above that would increase public and pilot safety, reduce noise, pollution, save money on aircraft fuel and cost nothing to implement. Then what are those solutions?

1. Land long - by 5500 ft on runway 120

2.Use railroad route inbound to runway 120 from west. Use aircraft bone yard for straight-in teardrop approach to runway 120 from the southeast.

Rationale

1. A January 29, 1994 front page news story (copy enclosed) in the Tucson Citizen identified an apparent agreement between the City and D.M. to move runway 120 8000 ft southeast and add 4500 at the southeast end - a net loss of 3500 ft - from 13643 ft to 10143 ft... Thus landing long by 5500 ft. would reduce runway 120 to 8543 ft ...

D.M Base Ops asserted that there is a 2000 ft graded dirt extension of runway 120 to the southeast - thus a total runway length of 10143 ft, the same as the above runway plan.

Pave that 2000 ft? It shouldn't be necessary as the entire 13643 ft would remain available for transient aircraft, instrument approaches and any flight emergencies if needed.

A-10 and C-130 aircraft can land on dirt in war zones and can land in as little as 2000 ft for A-10s, according to A-10 pilots and 3500 ft for C-130s. F-16s can and do land on the 7000 ft runway at TIA when it is the duty runway according to a colonel with the 162 ANG. All snowbird aircraft should be able to do the same, as most if not all are also built to land on aircraft carriers that have a restricted landing speed and weight limitations. But landing long will damage the runway as it is not concrete like the threshold, it has been said. Well the DOD IFR in route supplement describes runway 120

as PEM PCN 75 R/C/W/T. The W stands for what tire pressure the runway can handle and the W for D.M. stands for high, no limit. D.M. tower people also said that large aircraft are usually told to land long - and likely pass the concrete threshold in order to avoid damage from the arresting gear that is at the threshold. At TIA heavy passenger aircraft land on asphalt according to the IFR supplement - so there should be no problem for C-130 and A-10 and all fighter aircraft to land long at D.M.

2. The railroad route inbound to runway 120 from the west was recommended by the MC-3 committee for VFR flights inbound from the west. The news story referred to in this letter also planned a second runway 1000 ft southeast of the present one and nearly in line with the railroad trucks. One of the concerns with the railroad approach was "deconfliction" with the traffic arriving at TIA form the west 4.5 miles away. The railroad route only moves D.M. VFR traffic one half mile closer to TIA on average. A second D.M. runway 1000 ft from the other would entail far more "deconfliction" than the railroad runway 4 miles away. Another concern is that the railroad route would fly over downtown and Rio Nuevo. In fact it doesn't. The route is just north of downtown and provides a safer "crash" route than the current wide circle over the entire City of Tucson. The railroad route also conforms to the Air Force expressed ACUS intention to fly over the least populated areas when in a city environment. The nearly straight in railroad route was identified by the FAA at D.M. as being easier for them (see enclosed e-mail copy by Scott Hine).

This RR corridor has been a very loud 24 hour noise corridor for over 100 years and in the case of the few homes near the railroad, people moved to the noise whereas the Air Force in the early 50s moved the new jet noise to a majority of the homes in the case of the current flight pattern. The RR route will also save taxpayers a lot of jet fuel by eliminating the huge circle over the City prior to the overhead "perch". By landing long5500ft aircraft arriving VFR by the railroad route would intersect the 120 runway at the current threshold and thus would need only a 10 degree turn and have over 5000 ft of straightaway to land (a necessary prerequisite per Scott Hine) - unless a "perch" approach overhead 5000 ft down the runaway is used. As stated at the beginning the land long railroad approach will fully comply with Air Force ACUS directives, save taxpayers money on aircraft fuel, reduce pollution, noise and increase safety for both pilots and citizens. It would cost nothing to build. The 1994 plan would have spent 42 million to implement.

Unlike the 1994 plan, take offs would continue from the current 120 threshold and thereby avoid any increase in noise for folks living southeast of D.M. Also landing on runway 300 would remain the same and not be moved 4500 ft closer to those homes on southeast side as the 1994 plan would have done.

For all the above given reasons I believe the railroad, land long format should be tested by aircraft berthed at D.M.

The results may well show the justified concerns of Tucson citizens over snowbird operations can be significantly reduced if not eliminated. It is possible that an additional squadron of aircraft D.M. might even be acceptable under this plan.

Thank you for your evaluation of this matter. I will be glad to go over any questions concerning the above in person if you wish.

Ritur Barye

Richard Basye US Naval Aviator - Retired Broadmoor Neighborhood Rep to MCRC Ph (520) 795-1780

Enclosed

- 1. Copy of January 29, 1994 newspaper story on D.M runway redesign
- 2. Copy of FAA comment "simpler if the D.M. would just fly straight in" in Scott Hine e-mail of August 2009.

From: "Hines, Scott S Civ USAF ACC 355 FW/DIR CIT" <Scott.Hines@dm.af.mil>

Subject: [MCRC] Question Concerning Race Track

- Date: August 5, 2009 3:32:16 PM MST
 - To <Colleen@ManningHouse.com>, "Stein, Alan" <calabinkus@aol.com>, "Robin Gomez" <rgomez381@cox.net>, "Gerald Ledingham" <gledingham@theriver.com>, "Dick Basye" <richardbasye2004@yahoo.com>, <ami@dakotacom.net>, <alicer@dakotacom.net>, "Robert T. Medler" <rmedler@tucsonchamber.org>, "Michael Blaker" <mblaker@firstam.com>, "Hal Bardach" <halbardach@aol.com>, "Laura Burge" <Laura.Burge@tucsonaz.gov>, "Fred Zibell"
- Co. "Burrell, Paul J Civ USAF ACC 355 FW/CCT" <Paul.Burrell@dm.af.mil>, "McLaury, Jane A Civ USAF ACC 355 FW/PA" <Jane.Mclaury@dm.af.mil>

Tour Members,

I contacted Art Blank to clarify what was said/intended concerning his comments about the race track pattern.

He replied: "Your group member was asking me why the Air Force flew "Race Track Patterns". I commented to him that the FAA has nothing to do with how the military flies its approaches. I commented it would be easier if they just flew straight in but again, FAA only complies to user/customer requests. "

As we've discussed, the overhead recovery is a standard operating procedure. The "race track pattern" as we've defined it significantly reduces the amount of time an aircraft is slow, low and configured which translates into less time in the cross-hairs of the enemy. The race track pattern also allows the recovery of a great number of aircraft in less time.

VR...Scott

S. Scott Hines, DAFC YA-02 Director, Community Initiatives Team (CIT) 5275 E Granite St, STE 2062 Davis-Monthan AFB, AZ 85707

Office: CIT 520-228-5060 Cell: 520-204-4849, FAX: 520-228-5299 http://www.dm.af.mil/units/mcrc.asp

oseran007@aol.com F-35 September 10, 2012 10:52 AM

I strongly oppose the operation of the F-35 aircraft or any aircraft louder then the A-10 from operating in the Tucson Community. The urban core contains a major university with 40 thousand students, elementary schools, Churches, and a major Höspital. Loud noise is a detriment to learning, aute worship, healing and health.

My two complaints are noise and safety. The dense population under the flight pattern must be considered because all who live or frequent the area on a daily basis are at risk. We have evidenced this safety hazard in the past when a military aircraft crashed on Sixth street.

These aircraft would be better located flying outside heavily populated areas. Their impact on the urban quality of life is unacceptable.

iv OSTUAN N. NOUVIS AU ich Ad 72 Turson,

DATE: September 12, 2012

PAGE 1

FROM:

Robin A. Laidlaw (Mrs. Donald H. Laidlaw) dlaidlaw12@aol.com 2841 East Third Street Tucson, AZ 85716

TO:

ATTN: OSB EA COMMENT SUBMITTAL 355th Fighter Wind Public Affairs 3180 S. First Street Davis-Monthan AFB, AZ 85707

By way of background, I am 75 years old and have lived in Tucson since I was eight years old. I came here right after World War II was over. This Air Force Base has been a part of my life during all the years I have lived here.

There have been some extremely interesting and important things that have happened here such as the missile sites that ringed the city, the huge bombers that came here in the last part of the 1950's to be mothballed, multiple wonderful Armed Forces Days with Blue Angels and Thunderbirds to excite us all, and of course, now the C-130's and the helicopters and all the fabulous fighters etc., that fly in and out of the base along with their foreign counterparts.

For the past 30+ years we have lived just east of the University of Arizona and the best part of that is that the airplanes from Davis-Monthan Air Force Base fly over our house a good deal of the time. We look up, enjoy them, like the noise, don't feel disturbed and remember all the time that the Air Force is here to protect us and our country. On Armed Forces Day the fighters here to perform for the Thunderbirds or their counterparts fly right over our house – low and exciting and almost a better view than if you go out to the base. We just remark about what it must take to fly like that – reflexes, training...

The neighborhood we live in complains about almost everything except the rude bicyclists who don't pay any attention to the rules of the road. The residents don't understand what it means to have this Air Force base here and these airplanes here. They don't understand what it means to have pilots and airplanes from other countries use our skies and clear weather and probably our nearby bombing range for training. Probably a lot of them have never been in the military and have no use for discipline or self-sacrifice or national pride.

PAGE 2

We do.

We are in favor of Operation Snowbird and of all the other activities you want to have in the skies and on the ground here in Tucson. We appreciate the Air Force, the Air National Guard and what the military does 24 hours a day for each of us and our country. And, the countries who are our allies who want to train here are welcomed by us also.

Bring on the airplanes!!

Most sincerely,

haidlas 0 0

Robin A. Laidlaw

8/21/12 Attn: OSB EA COMMENT SUBMITTAL 355 the FIGHTER WING PUBLIC AFFAIRS 3180 S. FIRST ST. DAVIS MONTHAN AFB, AZ 85707 To Whom It May Concern, RE: Expansion of Operation Snowbird. The drast environmental assessment of This plan is deficient, in the following ways: 1) Public meetings are not scheduled. 2) It claims that the increase in noise will be insignificant, when actually it will be 4 times as loud and frequency of flights rearly doubled. 3) It claims that new night flights will have no significant effect on surrounding humans - this is not credible. Please allow an unbiased and independent environmental assessment, and please reconsider this ill-advised expansion at DMAPB. Sincerely, Sandra Almasy TUCSON CITIZEN

To whom it may concern,

I have been Director of Desert Spring Children's Center for 25 years and a member of the Tucson Early Childhood community. As educators, we agree that jet noise over our children on a daily basis is harmful to their development. Unfortunately, my preschool and numerous schools are directly under the Operation Snowbird flight pattern. When the jets fly overhead children are disoriented, scared and cry. High decibel flyovers pose a severe risk to the children who live and learn everyday in our midtown schools and neighborhoods. There brains are being negatively affected. For children, increased stress levels (as caused by loud noises and feelings of fear) bathe the brain in stress hormones. If the brains is exposed too much by this chemical, it's functions are reduced, slowed, or stopped altogether. From the ages of 0-7 the child is growing 70% of their brain. Jet noise puts these developing brains at risk.

The EA misleads the public with it's technical jargon and the subjective opinions are not backed up with verifiable data. There have been no public meetings since last September and the data has been changed since those meetings. The EA fails to investigate reasonable alternatives for basing the Operations Snowbird program somewhere else instead of flying over children. An EIS is needed to thoroughly investigate other possible locations.

It is important that the community and DM work together to define a future role that is compatible with the flight pattern flying constantly over thousands of children everyday. The constant noise over their heads is unjust and an environmental hazard.

Tucsonians want to raise their children in a healthy environment—without damaging noise pollution. The process needs to honor the daily lives of children and their health and safety.

Sincerely, Sara Van Slyke September 13, 2012 <u>saravanslyke@gmail.com</u> 707 E. 1st St. Tucson AZ 85719 Scott Ellis 3574 E Secretariat Tucson, AZ 85739 August 25, 2012

Commander 355th Fighter Wing, Public Affairs 3180 S First Street Davis Monthan AFB, AZ 85707

Sir or Madam:

I am a long-time resident of Tucson and am writing to express my satisfaction upon hearing that DMAFB will be expanding flights in support of Operation Snowbird. I happened upon an article in the Tucson Weekly, while waiting for my vehicle to be serviced that I felt was non-patriotic and angered me. I normally do not read the publication due to its content. The author was not pleased that the Air Force "has refused" public hearings on the planned expansion of Operation Snowbird. The author went on to claim that noise studies were ignored or not incorporated into the decision and then listed a series of fatal accidents involving aircraft near cities. The author then touches on the supposed adverse effects on tourism angle and its supposed negative effects on minorities/low-income folks in the flight path.

I am pleased to see that someone has the sense to take advantage of the opportunities that this area has to offer and make the most of it. Our location provides numerous benefits to the flying community and I believe that our public leaders/servants should make every effort to take advantage of those assets. I felt the author was short-sighted, ill-informed and has no comprehension of the efforts required to keep this nation free and prepared to defend itself on a moment's notice.

The benefits to readiness, camaraderie, good will and cooperation between nations far outweigh the slight increase in noise to area residents. I am proud veteran of over 20 years' service to our country and welcome the expansion.

I am glad to see that someone has the guts to make a good decision despite potential public protest.

Sincerely,

Scott Ellis

ATTN: OSB EA COMMENT SUBMITTAL 355th Fighter Wing Public Affairs 3180 S. First Street Davis-Monthan AFB, AZ 85707

Regarding: Operation Snowbird

To Whom It May Concern:

A big "NO" to increasing Operation Snowbird flights!!! The Operation Snowbird and Search and Rescue flights should be decreased significantly. The airplane noise in Tucson is already horrendous. Operation Snowbird started as a two-week winter operation in 1972. And since 2000, Operation Snowbird has quietly expanded to a yearround pre-deployment combat training, including foreign and sister-service pilot training without any safety assessment, noise assessment, or public notice to the residents under the flight paths. This expansion brought in F-15s, F-16s, F-18s, Harriers, and Tornados flying at low levels over highly populated Tucson neighborhoods. I can't stress it enoughthe noise from these planes is horrendous plus all these aircraft have higher accident rates than the normal DM mission aircraft (A-10s and C-130s). And the proposal to increase Operation Snowbird aircraft flights in Tucson is totally outrageous. How can the residences in Tucson bear the increase noise? And increasing the Operation Snowbird flights would have "no significant impact" is a total lie

The safety risks to our city, the increased noise and air pollution, and the economic damage suffered by the neighborhoods under the flight paths needs to be address. Julia Keen lost its school due to aircraft noise and safety in 2004 and continues to suffer greater declining property values. Other flight-path neighborhoods such as Naylor-Roberts, Arroyo Chico, Broadmoor, Sam Hughes and Blenman-Elm can expect to follow suit with the proposed increase of Operation Snowbird air traffic. Not to mention that a new charter high school was built this summer right under their flight path.

I have a three year old grandson who likes to play outside. These aircrafts totally frightens him when they come roaring over our house. Whenever, one of these airplanes from the Operation Snowbird and Search and Rescue program flies over our house, he puts his hands over his ears and cries and says, **"Too, Loud!" and runs into the house sobbing.** I totally agree with him. Davis-Monthan/Tucson International Airport Air Guard continues to have louder, faster with more frequent flights that are just too dangerous and too loud over a highly populated city like Tucson. I believe you need to look at alternative areas for these Operation Snowbird planes to fly. A highly populated city like Tucson, Arizona is not the right place to have this program. I believe that an airfield not surrounded by a high-density urban development should be selected, not only, for the Operation Snowbird but also for the Search and Rescue program. Having these programs flying over a highly populated urban city is just unreasonable, not smart, and unsafe.

Sincerely,

Shirley Ham 4502 E. 24th Street Tucson, Arizona 85711 (520) 784-1726 Shirley Ham 9/11/2012 Alan L. Stein & Terry Holpert 3248 E. Via Palos Verdes Tucson, Arizona 85716

September 13, 2012

.

OSB EA Comment Submittal 355th Fighter Wing, Public Affairs 3180 S. First Street DMAFB, AZ 85707

RE: Comments on the Draft Environmental Assessment For Operation Snowbird

Dear 355th Fighter Wing Public Affairs Division:

We are lifelong residents of midtown and are aware of the expansion and operations of Davis Monthan Air Force Base (DMAFB) since the 1960's. We write to oppose the basing of Operation Snowbird (OSB) in Tucson as specified in the draft Environmental Assessment (EA) and request that a complete Environmental Impact Statement be conducted.

Background

By way of background, OSB officially began in 1975 as a National Guard program supported by the Arizona Air National Guard (ANG) to provide training to northern tier Air National Guard flying units at DMAFB during 2 week periods between November and April. The OSB aircraft initially operated were F-100 and A-7s. (Wyle Study*, pp.5,18-19)

In 1978, the National Environmental Policy Act (NEPA) required that ANG conduct an EA of OSB. However, the draft EA did not meaningfully assess the nature and extent of the aircraft flying and training over Tucson.(Wyle Study, pp.7,54) Between 1988-1992, OSB aircraft dramatically changed from F-100 and A-7s to F-16s, which are far noisier and less safe. In 2000, the program again drastically changed from a 6-month program to a year-round program, including training of international pilots. From 2000 to present, the type of OSB aircraft again substantially changed, adding C-130, F-18, helicopters, F-15, British Tornados, Harriers and F-3s, among others.(Wyle Study, pp.23-25). These changes once again increased the noise levels on a more sustained basis and presented additional concerns about the safety of these aircraft. We emphasize that at no time during these expansions did DMAFB ever alert the community to these changes in OSB operations or aircraft nor did it seek NEPA approval, as required by law.

In the course of Military Community Relations Committee (MCRC) meetings, it was determined that DMAFB had been operating OSB in violation of NEPA since approximately 1988, when the program drastically and substantially changed. As a consequence of neighborhoods' examination of OSB, in November 2008, DMAFB requested that an Environmental Impact Statement (EIS) of OSB be conducted, but inexplicably, its request was denied.(Wyle Study, p.54)

The current OSB program, which has expanded military operations year-round with aircraft too noisy and dangerous to be flying over the most densely populated areas of Tucson, represents over twenty (20) years of the Air Force (AF) systematically violating NEPA. The AF, by continuing to secretly expand OSB, deprived Tucsonans of their legal rights to timely object to DMAFB's illegal conduct. Despite the fact this program can be operated out of other AF installations, DMAFB has been continuing to operate OSB knowingly in violation of NEPA since 2008.

The expansion of OSB the AF proposes in the draft EA almost doubles the number of sorties flown from DMAFB over the most densely populated areas Tucson (from 1190 sorties in 2009 to 2256 sorties), expands the range of aircraft operated, and for the first time seek nighttime flights between 10pm and 7am. These changes are dramatic and significant in many ways. However the draft EA, authored in the most conclusory of terms is misleading, unlawfully fails to disclose all the information developed in the course of issuing the draft EA and upon which it is based, completely ignores the cumulative impacts of an expanded OSB program on our community and our fragile environment, how the changes will adversely and irrevocably impact the habitability and viability of major sections of Tucson, particularly the central city, downtown, the University area and the residential areas that surround DMAFB. Yet despite seeking to virtually double the sorties as noted above with new noisier and less safe aircraft and refusing to assess the cumulative impacts of its proposed changes, DMAFB has the temerity to conclude OSB will not have a significant impact on the quality of the human or natural environment (FONSI) and now refuses to initiate an EIS.

The draft EA for OSB is slipshod, incomplete, fails to fully and properly disclose the bases for certain conclusions, is written such that a lay person has difficulty understanding it and fails to properly assess all the impacts of OSB on our community

(A) AF proposes almost doubling OSB flights and, for the first time, flights at all hours of the night

In the draft EA the AF proposes, among other things: slightly less than doubling the number of sorties flown from DMAFB over the most densely populated areas Tucson (1190 sorties to 2256 sorties) from 2009, expanding the range of aircraft operated, and for the first time proposes flights between 10pm and 7am. The aircraft will include the F-18, the F-15, F-22, AV-8 Harriers, Mirage, Typhoon Kfir, Ospreys and Rafale. Certain of these aircraft promise to be louder than any previous aircraft and the safety record is not fully provided.

(B) The AF unlawfully refuses to disclose the 2007 Noise study upon which its "noise analysis" is based, but nevertheless averages the noise over a 24 hour period and minimizes the noise generated from certain of the noisiest OSB aircraft

Additionally, the 2007 Noise Study (ACC2007), which is the basis of the new noise contours for OSB, that the AF used to assess the actual noise OSB aircraft actually generate is not disclosed, which nondisclosure violates the law. Despite the fact the AF refuses to disclose this "noise study", to the extent known it is inaccurate and utterly misleading. For example, the "noise study" minimized actual noise generated by OSB aircraft by averaging noise over a 24 hour basis and did not even measure all the OSB aircraft, notably eliminating from the "study" the noise levels of some of the noisiest aircraft, such as the F-18, the F-15, F-22, AV-8 Harriers, and Ospreys. This Noise Study should be contrasted with the military's own noise guidelines (NIOSH) used to protect its service people from damaging their hearing from noise. NIIOSH uses a cumulative measure, not 24 hour averaging, which if applied to OSB would only allow a few minutes of exposure to the noise levels that some neighborhoods currently experience on the ground from some of the OSB airplanes.

(C) Incomplete safety data

The safety data provided for OSB aircraft is on a Table developed by the AF listing certain risk factors. DMAFB refuses to furnish for public examination and comment the methodology and the calculations for its safety analysis. To the extent available, it is obvious that a complete safety analysis is lacking. For example, the F-15 is at the end of its service life and one disintegrated in flight approximately 3 years ago resulting in grounding the entire fleet. The AF does not consider this significant safety risk in its safety analysis. As for the Ospreys, a fatal crash occurred in Marana several years ago, which if it occurred over midtown where OSB will fly them would have clearly resulted in even more fatalities. In addition, it does not analyze Class B and C accidents and totally refuses to furnish any safety analysis for the Mirage, Typhoon Kfir and Rafale.

(D) No Environmental Justice Analysis Performed

The AF refuses to address the significant issue of "environmental justice" presented by its desired proposals. In the draft EA, the AF admits that OSB disproportionately impacts minority and low-income populations who reside in 826 homes and 134 multifamily complexes near DMAFB. Because of their proximity to military aircraft, these dwelling units are deemed "incompatible with residential use". Under Executive Order 12898 (Environmental Justice), the AF is required to conduct a complete analysis of all the "environmental effects, including human health, economic and social effects of Federal actions" on the minority and low-income community. The AF did not make such an analysis.

(E) No Assessment of the Impact of OSB on Children Performed

The AF also refuses to assess the impact of OSB on children. Executive Order 13045 requires the AF to assess the health and safety risks that may disproportionately affect children but no such assessment is made. There are no less than four(4) schools under the flight path: Griffen Foundation charter school, Robison Elementary, Howenstein High School, and St. Ambrose Elementary.

(F) Incomplete participation by all Tucsonans

A review of the draft EA makes plain it is a very technical document filled with unfamiliar jargon. Many of those impacted by OSB speak English as a second language, Spanish being their primary language. Request was made of the AF that the draft EA be published in Spanish so that all impacted could understand the AF's proposed OSB expansion and comment on it. The AF has refused to do so.

(G) Cumulative Effects and the Impact on Tourism are not measured

NEPA requires analysis of the cumulative effects of Federal action, not simply those of the specific proposed action. In addition to OSB, substantial other military operations are conducted out of DMAFB and Tucson International Airport, Department of Homeland Security as well as civilian and commercial aircraft operate over Tucson.Contrary to NEPA, the cumulative impact of these operations on the entirety of Tucson's fragile environment is not addressed nor is its effect on tourism. As for tourism, it generates over \$2 billion in spending annually and is responsible for over 21,500 direct jobs. Whereas DMAFB's best estimate of the economic impact of OSB was "maybe" \$300,000 and few jobs are created by comparison. In short, the draft EA does not analyze the cumulative impacts of OSB on Tucson.

An EIS of OSB should be prepared

NEPA requires an EIS be completed before major federal action is undertaken that significantly affects the quality of the human environment. An EIS differs from an EA in that an EIS is a far more rigorous and complete process and also requires a review of alternative locations to the proposed federal action. In 2008, DMAFB admitted that an EIS of OSB was required but the Department of Defense refuses to perform an EIS.DMAFB should now be compelled to conduct the EIS that the law requires.

We and our neighbors have worked hard with representatives of DMAFB over the last six years to reach a mutually amicable resolution to this and other issues. This draft EA makes apparent that DMAFB is not interested in being a "good neighbor." Rather, DMAFB seeks to enlarge its mission from an A-10 base into a year-round, full-time base for training foreign and visiting pilots using some of the most sophisticated, noisy and dangerous aircraft. Living in midtown as we do, we have experienced this aircraft and OSB program and it is unsuitable for our urban environment and will unduly impact us all, including low-income and minority populations. Expanding OSB with all the aircraft proposed will make DMAFB's operations more invasive and will render many parts of

the central city simply incompatible for residential use. We are also concerned that in the future OSB will be expanded to include the F-35.

Significantly DMAFB is not the only suitable location for OSB. In fact, DMAFB competes with other AF installations for OSB. Among other benefits, an EIS would allow the AF to actually compare among all AF installations the base most suited for this program. Given the budgetary issues facing our country, for the AF to refuse to conduct an EIS would be irresponsible.

Conclusion

Obviously, OSB is a critical issue to many of us who operate businesses, have invested our lives in Tucson, and have much of our savings in our homes. The current OSB and the expansion of it specified in the draft EA should not be based in Tucson, at DMAFB or TIA and a full EIS should be conducted.

Respectfully submitted,

Alan L. Stein & Terry Holpert

* During 2009-2010, Wyle conducted a study of OSB on behalf of DM and ANG and issued its report in late 2010. The report is based solely on information furnished to it by DM and ANG. Wyle neither audited the information provided to it, it termed some of the data collection "inconsistent," nor did it conduct its own testing. (Wyle Study, pp54-55) References to the Wyle Study here refer to certain pages of its study and the documents upon which it is based.

ATTN: OSB EA COMMENT SUBMITTAL 355th Fighter Wing Public Affairs 3180 S. First Street Davis-Monthan AFB, AZ 85707

Oct. 1, 2012

To Whom It May Concern:

Regarding public comment/period. Just wondering if anyone's done any Recent air-quality studies at Northwest (etc), end of DM's runway, regarding increased overflight activity.

Additionally, it does appear as if the noise (also etc.) has increased in recent weeks/months, particularly at northwest end of the runway. Increasing such overflights would likely exacerbate the noise/etc., issues, would it not...?

Stere C Educate

Sincerely, Steven C. Edwards Tucson

August 29, 2012

Attn: OSB EA Comment Submittal

355th Fighter Wing Public Affairs 3180 S. First Street Davis-Monthan AFB, AZ 85707.

To Whom It May Concern:

How many letters will it take to convince you people that Operation Snowbird is already too large and should only grow larger to the peril of all Tucson residents.

The EA is full of holes, half truths, guesstimates, and wrong information. Doubling the size of an already noisy operation can hardly produce "no significant impact" to a place already significantly negatively impacted.

A formal EIS must be done and instead of using computer models for sound, real models operating under real circumstances should be employed. It doesn't take a rocket scientist to understand the principal of some noise as compared to a lot more noise.

Why do you hang on this location? There are so many places with small populations you could be training over. Why risk the fall out that will surely come from one of these noisy cumbersome planes malfunctioning over our civilian population.

My property, built in 1931 prior to jet planes, is seriously impacted on a daily basis by DM with frighteningly low flight approaches and noise that rattles windows and walls and brings conversation to a halt time after time. Are we now to look forward to this happening twice as many times plus have to stick ear plugs in our ears to sleep through the night.

You have no right to ruin a sitting population and to endanger our lives and our businesses. I run a bed and breakfast in the Sam Hughes Neighborhood and I can honestly say that every guest notices the noise and in thirteen years no one has said, "oh isn't that noise fabulous".

For heavens sake and before it's too late. Take this notion of growing bigger off your calendars or move the base to an empty place.

Sincerely,

Susan Banner 2020 E. 7th St. Tucson, AZ 85719

DATE: 32012

ATTN: OSB EA COMMENT SUBMITTAL 355th Fighter Wing Public Affairs 3180 S. First Street Davis-Monthan AFB, AZ 85707

Dear Sirs:

I am sending you my comment regarding the Draft Environmental Assessment on Operation Snow Bird, which was released on July 31, 2012. The conclusion of your draft is a Finding of No Significant Impact. I will attach my personal impacted experiences at the end of this letter.

The draft is extremely long, and almost impossible to understand everything in it. But since we live close to the DM AFB runway, we are very affected, even now, which we see that you admit. Yet you say there will be no significant impact, even if you double the flights and add night flights. I strongly disagree with this finding.

I will site a few things for your consideration:

1. We definitely have an Environmental Justice problem in this area. You state in your cover letter lines 47-49: "There would be no additional disproportionately high and adverse impacts on minority and low-income populations near DMAFB compared to those impacts associated with No Action Alternative." If you change nothing, we are still impacted and will continue to be more impacted because you keep bringing in more loud and more dangerous aircraft right over us without our permission and with no regard to our safety and wellbeing. And if you bring in more aircraft, or double the aircraft and add night flights, we will actually be extremely, significantly impacted.

2. Your EA does not investigate reasonable alternatives for basing the OSB elsewhere, even though in an EA you may not be required to do that; therefore an EIS is needed to thoroughly investigate other possible locations in less encroached areas, and to give a better report on the actual aircraft you desire, which you have left out many in this EA, and provide true noise levels, not computerized models of noise levels.

3. Your EA has very misleading and even false information in it. You do not state the effects on the actual neighborhoods closest to DMAFB, and mid-town Tucson. You chose to talk more about the southeast end of the runway, which is not encroached, and you talk about downtown Tucson, who is not in the flight path. The most impacted people are in the flight path, and accidental potential zones, and the circling of planes all over Tucson.

4. Your EA talks about adding night flights. You already fly late at night, early in the morning right after midnight, and even early in the waking hours. And this is only night time, daytime is even worse. You want to add night flights saying that it won't bother people because "human activity may be more relaxed." (Quoting pages 3-2, line 5 & 6). Most people are sleeping, and the planes that are so loud, wake us up and frighten us, and other people work at night and will also be affected.

There are numerous things to be said about the inadequacy of this EA report. A TRUE EIS is required and requested.

I request a copy of your final decision on this EA, please send it to me at my mailing address, or at least by e-mail.

Thank you for your time, and now I will attach separately my own personal experiences proving to you that I am impacted by the DMAFB aircraft even now, and continue to be and will continue if you add any number of aircraft.

Sincerely.

Printed Name: 11 MOTHY D. MEADOR Address: 3837E TECHNICAL DR TUCSON, AZ 85713 E-Mail Address: B4GN JESHS OGMAIL.COM

These are my personal comments attached to the letter: TO WHEN IT MAY CONKERN, T PERSONALY FIND THE EXTREME NOISE MADE BY THE LETS ANNOYING, EXTREMELY LIPSETTING, PLUS IT IS IMMPOSSIBLE TO HEAR ANY THING WHILE I'M INDOORS , PLUS THE F-18, OR WHATEVER THEY ARE CRUSE ME TO HAVE HEADACHES, CAUSE MY DOGS PAIN & MAKE IT IM BSSIBLE TO SLEEP. I'M STRONGLY AGAINST INCREASED FINGHTS & ANY NEHT FIGHTS.



3837 E. Technical Dr. Tueson, Az 85713 DATE: 10-4-12

ATTN: OSB EA COMMENT SUBMITTAL 355th Fighter Wing Public Affairs 3180 S. First Street Davis-Monthan AFB, AZ 85707

Dear Sirs:

I am sending you my comment regarding the Draft Environmental Assessment on Operation Snow Bird, which was released on July 31, 2012. The conclusion of your draft is a Finding of No Significant Impact. I will attach my personal impacted experiences at the end of this letter.

The draft is extremely long, and almost impossible to understand everything in it. But since we live close to the DM AFB runway, we are very affected, even now, which we see that you admit. Yet you say there will be no significant impact, even if you double the flights and add night flights. I strongly disagree with this finding.

I will site a few things for your consideration:

1. We definitely have an Environmental Justice problem in this area. You state in your cover letter lines 47-49: "There would be no additional disproportionately high and adverse impacts on minority and low-income populations near DMAFB compared to those impacts associated with No Action Alternative." If you change nothing, we are still impacted and will continue to be more impacted because you keep bringing in more loud and more dangerous aircraft right over us without our permission and with no regard to our safety and wellbeing. And if you bring in more aircraft, or double the aircraft and add night flights, we will actually be extremely, significantly impacted.

2. Your EA does not investigate reasonable alternatives for basing the OSB elsewhere, even though in an EA you may not be required to do that; therefore an EIS is needed to thoroughly investigate other possible locations in less encroached areas, and to give a better report on the actual aircraft you desire, which you have left out many in this EA, and provide true noise levels, not computerized models of noise levels.

3. Your EA has very misleading and even false information in it. You do not state the effects on the actual neighborhoods closest to DMAFB, and mid-town Tucson. You chose to talk more about the southeast end of the runway, which is not encroached, and you talk about downtown Tucson, who is not in the flight path. The most impacted people are in the flight path, and accidental potential zones, and the circling of planes all over Tucson.

4. Your EA talks about adding night flights. You already fly late at night, early in the morning right after midnight, and even early in the waking hours. And this is only night time, daytime is even worse. You want to add night flights saying that it won't bother people because "human activity may be more relaxed." (Quoting pages 3-2, line 5 & 6). Most people are sleeping, and the planes that are so loud, wake us up and frighten us, and other people work at night and will also be affected.

There are numerous things to be said about the inadequacy of this EA report. A TRUE EIS is required and requested.

I request a copy of your final decision on this EA, please send it to me at my mailing address, or at least by e-mail.

Thank you for your time, and now I will attach separately my own personal experiences proving to you that I am impacted by the DMAFB aircraft even now, and continue to be and will continue if you add any number of aircraft.

Sincerely,

Joonony Lawert

Address: 3837 & Teolinicai DR#1 Tueson, Az 85713

E-Mail Address:

September 11, 2011

ATTN: OSB EA COMMENT SUBMITTAL 355th Fighter Wing Public Affairs 3180 S. 1st Street Davis Monthan AFB Tucson, AZ 85707

Re: OSB EA Comment Submittal

I am writing to object to the draft EA for the Davis Monthan Air Force Base in Tucson, Arizona and to state my objections to the expansion of Operation Snowbird based at DM. There are numerous and important reasons for limiting the numbers and types of aircraft flying in and out of DM and I am sure you have received many letters stating all of these.

The types of proposed aircraft and the doubling of the numbers of fights proposed are unreasonable and dangerous to our community. We have already suffered a tragic accident many years ago near the location of our University of Arizona, which no one (including myself—a native) in our community who was a resident here at the time will ever forget it. That is just one of the reasons we do not encourage the Air Force to bring their F35's to our community.

Tucson is a large, but still developing metropolitan area; its main business area and the largest portion of its population lie directly under the paths of these aircraft. Today's aircraft are generations away from those which flew over Tucson even a few years ago. It, for no other reason than safety (and there are MANY more-which you have no doubt heard), the proposed expansion should not occur. We have a University and downtown area entitled to safety and the reasonable expectation for healthy growth which cannot be achieved and maintained if the proposed numbers and types of aircraft are allowed to fly over these densely populated areas. Arizona has other legitimate, safer, and more suitable places to house and train these aircraft and their missions.

Sincerely,

Winnie Mull

Winifred K. Null 2225 East Seneca St. Tucson, Arizona 85719

WHY AN EIS IS NEEDED FOR THE OSB EXPANSION PROPOSAL

1. NO REASONABLE BASING ALTERNATIVES

There are no reasonable basing alternatives included in the OSB Draft EA. Thousands of local citizens sent letters and petitions to Washington expressing concern about the noise and safety of the new aircraft that was introduced into the Operation Snowbird program. A delay of training is not a rational argument. Operation Snowbird operated out of TIA while the runway at DM was being resurfaced. Other temporary arrangements can be made. There is no effort demonstrated to locate other suitable locations in less encroached areas while several other options exist. The cost factor is rightly not mentioned in the Draft EA especially in light of the billions being spent on the F-35.

2. THIS IS A CONTROVERSIAL ISSUE WITH A HIGH PUBLIC TURN-OUT AT THE SCOPING MEETING TO NW OF DM

This is an important and controversial issue which is given short shrift in the OSB DEA. There are no public meetings yet much of what was presented during the scoping period has changed...i.e. 1.) The baseline was changed from 2002 to 2009 2.) A new 2007 noise study and new noise contours were introduced. 3.) There is now discussion of Runways 12 and 30 which is not understandable. 4.) There is now mention of a low-income minority area subject to disproportionate noise impact.

There was a high public turn-out at the scoping meetings in the densely-populated mid-town area (Crowd opposes expansion of Snowbird <u>http://azstarnet.com/news/local/crowd-opposes-expansion-of-snowbird/article_c266a455-4982-5b1d-b66b-e6dc4218c2e1.html</u> Arizona Daily Star, September 28, 2011) and a low turn-out at the meeting in the SE area indicating a lesser impact on humans in that area. The document indicates incorrectly that the majority of the noise is to the SE. (See more 7. MISLEADING INFORMATION).

There has been insufficient effort to reach out for community involvement. No notices were sent to the population that already is disproportionately impacted by aircraft noise. This was incorrectly stated in the draft document. Initially, it was indicated that E-mail comments would not be accepted making it difficult for many who are out-of-town at this time of year. This was especially the case for those who are out of the country. E-mail comments were accepted during the OSB scoping period and also for the recent F-35 EIS. They should have clearly been accepted for the draft OSB EA.

3. THE OSB DRAFT EA IS TOO TECHNICAL AND FILLED WITH JARGON AND ACRONYMS

There is need for a plain English EIS. The DEA uses jargon and acronyms that are not easily understood by the general public. Example: P. ES-1 "NGB is preparing to update its TP 60-1, including the RMP, which would address the NGB's proposed management of OSB at DMAFB." One shouldn't have to go back and forth to a list of acronyms to read the document. The general public also doesn't understand that Runway 12 and Runway 30 is really one runway and that 12 and 30 refer to compass directions. The document leaves out the important circular flight path over the City, making it difficult for civilians to understand the impact of the flights on the community.

4. A FONSI IS ACHIEVED USING SUBJECTIVE AND INCORRECT DATA

The FONSI summary is subjective with little data to back it up. A more thorough analysis is needed.

5. THE PUBLIC WAS TAKEN BY SURPRISE BY AN UNSUBSTANIATED 2007 NOISE STUDY

The 2007 OSB Noise Study was never mentioned during the scoping meetings. It seems to coincide with the release of a new AICUZ. The 2007 Noise Study was never vetted by the public nor was it mentioned in a press release or at a MCRC meeting. When asked for a copy of the 2007 Noise Study, several members of the public were told by the DM Public Affairs Office that it was an "Internal document not available to the public at this time." There is little information on how the noise data was collected or why certain aircraft were selected or omitted. Also, there is no mention of onsite noise data collection. We assume that there was none. An EIS using more precise onsite noise data needs to be done. After the claim that OSB aircraft were analyzed in the 2002 CSAR EA yet never mentioned in the document, there is some skepticism among the public about the 2007 Noise Study.

6. THE NOISE DATA NOT ONLY OMITS SOME OF THE LOUDEST AIRCRAFT, BUT THE DATA IS WATERED DOWN BY AVERAGING (DNL).

The true impact of noise is better measured by Sound Exposure Level (SEL), which is a single event which can produce the "startle" reaction that is briefly mentioned on page 4-1, L32-34. The statement "the average of the events (i.e., DNL) still represents the most accurate assessment of the conditions." is never substantiated. It is an opinion not backed up by research data or health studies. The noise level of a single F-22 passing over at 500' above ground level (i.e. the level of the Julia Keen Neighborhood) can reach 120 dB. On P 3-1, L30, the DEA states that the threshold of pain is also around 120 dB. It appears that the loudest OSB aircraft have been omitted from the 2007 Noise study. The SEL single event would be more significant than DNL when doing a study on human health effects on minority low-income populations as required by Executive Order 12898.

7. THE AF NOISE MODELING PROGRAM BASEOPS FAILS TO GIVE A TRUE PICTURE OF THE NOISE EFFECT

Page 4-1 of the DEA mentions the AF BASEOPS noise modeling program that was used to come up with the noise contours that contribute to a false conclusion that doubling the number of OSB flights and allowing night flights would result in only a slight increase in the number of impacted homes and multi-family buildings. This conclusion defies common sense.

A false assumption was made on P. 4-1, line 23-24 that F-16C and F-15A aircraft were suitable substitutes for additional OSB aircraft. Therefore, the AF simply left out the louder F-22s, F-18s, and the Harriers. The attached AF Edwards F-35 Noise Test Data shows at 1,000' that the F-16 C (PW229) at Min Power to be 89 dB while the F-18C/D to be 95 dB, 6 dB louder. Each 10 dB doubles the perceived noise. The attached graph shows the F-15A at the same altitude to be 91 dB and the F-22 to be 102 dB. The F-22 is more than twice as loud as the F-15A used in the modeling. The F-22 is well over twice as loud as the F-16. Along with the watered-down DNL, leaving out the loudest OSB aircraft results in inaccurate noise contours that ultimately result in a false conclusion that there is only a slight increased impact on the residents. An information sheet distributed by DM to the MCRC (attached) shows the Marine Harrier AV 8B (84.0% RPM) at 500' to be almost 113 dB, four times as loud as the F-16C. at 1,000'. There can be variances in noise measurements, but omitting the loudest OSB aircraft demonstrates that clearly a more careful analysis and computer modeling of OSB noise need to be done. It appears that most of the foreign aircraft, the osprey, and the helicopters have been omitted from the noise modeling that produced the noise contours.

Also, the noise modeling fails to address the impact of the two circular flight paths over the city and assumes a straight-in approach. This is not the case. In addition to the larger circular flight path over the city, there is also the "racetrack" pattern done prior to landing over neighborhoods to northwest of DM. This is not taken into consideration.

The noise contours in the DEA are considerably smaller than those in the Airport Environs Zone (AEZ) adopted by the City of Tucson in 2004. These noise contours were based on hypothetical 5-squadrons of F-16s. The diminished size of the DEA noise contours is likely due to the absence of data for many of the louder OSB aircraft.

8. MISLEADING INFORMATION

On P. 4-16, Lines 27-30 "1. Airfield departures and arrivals, to the maximum extent possible and consistent with established safety procedures, use air space southeast of the base. 2. Traffic patterns are flown to minimize overflights of populated areas. 3. Operational areas for aircraft are over very sparsely

populated areas. (There needs to be a definition of "Operational areas".) These statements are blandly misleading and simply not true. The number of take-offs toward the less encroached area SE of base is about equal to the number of landing over the densely-populated area NW of the base. There is no mention in the document of the circular landing pattern over the City of Tucson. After circling over the City, the OSB aircraft descend to approximately 2,000'over the Broadmoor Neighborhood, then to approximately 1,500' over hundreds of home in the Arroyo Chico Neighborhood, descending to approximately 1,000' over Reid Park and finally coming in over the Julia Keen Neighborhood at about 500'. These are all densely-populated residential areas. The Julia Keen Elementary was closed in 2004 due to low-flying Davis-Monthan aircraft. This neighborhood is indicated in Table 2-4 on page 2-13 to be a minority, low-income population that is disproportionately impacted by military aircraft noise. The question remains as to when this neighborhood was first designated under Executive Order 12898 of February 16, 1994- Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations? Is mitigation required?

When discussing the impact of noise, the DEA fails to explain the meaning of Runway 12 and Runway 30. The EA doesn't make it clear that this is a single runway and that 12 and 30 refer to compass directions.

Aircraft **can take** off to the SE on Runway 12, but they can also **land** on Runway 12 after circling over the urban neighborhoods. This is the common practice. Runway 30 doesn't equate only to the area SE of the base. It is a compass direction. The EA fails to explain this.

Page ES-2, Lines 18-21 states: "To further abate noise, departures would use Runway 12 and arrivals would use Runway 30 **to the extent practicable**, particularly during the few nighttime operations. This action would concentrate the majority of the air traffic noise southeast of DMAFB and away from the majority of the population near downtown Tucson." This statement is misleading and does not reflect the ongoing practices. Not only is this statement false, but the procedure outlined may well be unsafe. 98% of the landings are over the area to northwest of D-M.

There is no map in the DEA document which accurately shows the circular "racetrack" pattern which is done shortly before landing over the NW area. The poster displayed during the scoping meetings showed this circular "racetrack" pattern to be located within the boundaries of the base. This is incorrect. The "racetrack" landing pattern is made over the Julia Keen Neighborhood by most OSB aircraft.

The 1989 EA for Realignment of Forces at Davis-Monthan Air Force Base, Arizona clearly states on page 9 in it conclusions and recommendations that the major concern is the area to northwest of D-M and that encroachment is nearing a critical stage. The OSB DEA incorrectly makes it appear that the majority of the noise and safety concern it to the southeast of D-M. This is not true. Also, this area is far less encroached.
Source: 1989 EA for the Realignment of Forces at Davis-Monthan Air Force Base

"o An analysis of existing and proposed land uses within the Davis-Monthan AICUZ indicates that the primary concern is with existing land uses off the northwest end of the runway and the future land uses surrounding the other boundaries of the base, primarily the southeast."

"o There is significant impact upon the City of Tucson from Davis-Monthan AFB operations. Encroachment of Davis-Monthan AFB is nearing a critical stage; however, in order to insure the public health, safety, peace, comfort, convenience, and general welfare within the airfield environs, and to prevent the impairment of the airfield, it is necessary to guide, control, and regulate future growth and development.

9. THE EA ATTEMPTS TO MINIMIZE THE IMPACT THROUGH WORDS

The DEA systematically makes an effort to minimize the impact of doubling OSB flights and adding night flights, by repeated use of words that tend to make the reader believe that there will not be a significant negative impact on the human environment...i.e." Insignificant impact", "imperceptible to the residents", "no significant impacts", "No long-term adverse effects", "slight change", "not measurably increased", "extremely low", "no additional disproportionately high and adverse impacts on minority and low-income populations", "small numbers". When talking about doubling the number of flights of the loudest aircraft and adding night flights, a finding of no significant impact obviously doesn't make sense. The DEA for Operation Snowbird is not a serious document designed to meet NEPA requirements, but a "sales job".

10. ENVIRONMENTAL JUSTICE

Cover Letter, lines 47-49 "There would be no additional disproportionately high and adverse impacts on minority and low-income populations near DMAFB compared to those impacts associated with No Action Alternative." Table 2-4 on page 2-13 does identify a minority low-income area that is disproportionately impacted under the OSB "No Action Alternative" and yet it somehow concludes that doubling the number of OSB sorties and adding night flights "would likely be imperceptible to residents." This doesn't make sense. ES-3-ES-4 "These expansions in the noise contours would be imperceptible to the residents as the changes in contours would be less than 50 feet. Public safety risks would not be measurably increased under any of the alternatives." These conclusions are based on incomplete data used in the noise study and in noise modeling. Common sense tells us that you can't double the number flights introducing night flights and have no significant impact on the quality of life and safety of the residents in an area already identified in violation of Environmental Justice Regulations. While acknowledging that an area is an Environmental Justice concern, there is no mention of need for mitigation.

Under the Environmental Justice section on page 3-19, there is little information about Census Tract 20 and 21 which includes the minority neighborhoods that are in

the high noise zone for OSB. The EA used the less affluent City of Tucson as their Community of Comparison (COC) rather than Pima County that was used in the F-35 EIS. Using the City of Tucson as the COC would exclude comparison to more affluent areas i.e., the Catalina Foothills and Oro Valley.

The recent F-35 EIS for TIA used the number of residents disproportionately negatively impacted in a low-income area, not the number of structures. This DEA never mentions the number of people impacted, but only the number of homes, multi-family buildings and other buildings. There are many coop buildings in the Julia Keen Neighborhood with hundreds of residents. The EA is tasked to evaluate the impact on humans.

The purpose of Executive Order 12898 is to focus federal attention on the environmental and human health effects of federal actions on minority and lowincome populations with the goal of achieving environmental protection for all communities. Yet there were no notices mailed to the residents of the low-income minority area that is already negatively impacted by noise from D-M overflights. There were no materials or notices in the Spanish language provided, although they were requested. An EIS needs to be done with appropriate materials in Spanish along with a careful study that evaluates the environmental and health effects of the aircraft on this area.

Table 4-8 on page 4-14 clearly shows that there is a disproportionate impact on lowincome and minority populations. Why aren't there any means for mitigation mentioned?

http://www.epa.gov/lawsregs/laws/eo12898.html

Summary Executive Order 12898 - Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations.

11. LACK OF ANALYSIS OF THE ECONOMIC IMPACT ON TOURISM, ONE OF TUCSON'S MAJOR INDUSTRIES

The Draft OSB EA states on Page 3-13 that tourism is a major industry in Tucson, "Tourism is a major industry in the region. According to the Metropolitan Tucson Convention and Visitors Bureau, in 2010, tourism accounted for approximately 21,500 jobs in Pima County. The County has approximately four million domestic overnight visitors per year (2006). Visitors account for more than \$2 billion in direct travel spending and generate more than \$124 million in direct tax receipts annually (2010)."

Strangely, after making this statement the DEA states on page 4-10 "Concerns about the impacts of an expansion of OSB activity on the tourism industry were expressed by citizens at public meetings and in written comments. Anecdotal information presented cites noise as causing an adverse impact on tourism-industry businesses.

However, any adverse impacts on tourism in the region would be the result of all DMAFB-related activity, not just OSB, and they would be difficult to quantify. The Proposed Action makes only minor changes in the number of homes and businesses within the 65 dBA noise contour, and most of the business areas are light industrial. Consequently, the Proposed Action would have negligible adverse impacts on tourism."

The economic impact on tourism, one of Tucson's major industries, needs to be done in an EIS. It can't simply be said that it is too difficult to separate OSB from other DM overflights and not address the negative economic impact of the loudest aircraft. The 65 dB noise contour mentioned relates to residential use, not to whether a tourist sitting by the pool will want to return to Tucson for another visit. The DEA fails to address the impact on hotels that are in the circular return path to D-M.

12. CUMULATIVE IMPACTS

This section of the DEA is sorely lacking and premature. Although the initial assignment of the F-35 has been made to Luke AFB, a secondary beddown in December, 2014 is still to be decided. The F-35 EIS stated that the D-M flight path would be used from time-to-time, if TIA were named. Also, the F-35 EIS mentioned that live ordnance would be loaded at D-M. The EA does mention "Cumulative effects on the noise contours surrounding DMAFB and TIA could occur if the F-35A beddown occurs at TIA"

The EA fails to mention the railroad tracks located near the neighborhoods that received the highest DM noise impact. There has been mention in the press of possible expansion of the rails through Tucson. In light of the cumulative impact, an EIS needs to research the amount of noise from the trains and future railroad expansion in the area near the disproportionately impacted area

The DEA fails to mention events such as the Heritage Flight Conference that was held at D-M in March or the bi-annual Air Show/Open House that was held at D-M in April. One of the Air Show participants broke the sound barrier while practicing causing damage to several businesses and homes. These properties were not located in the high noise zone mentioned in the DEA, but in the area of the circular flight path over Mid-town Tucson. Also, DM hosted the Hawgsmoke Competition in August. The competition was held at the B. G. Range, but they came thundering back to Davis-Monthan over the neighborhoods.

Although at high altitudes, the DEA fails to mention the commercial air traffic over the City.

In the Cumulative Impacts section of the DEA on page 5-2, Line 40, it is claimed that OSB aircraft were evaluated in the 2002 CSAR EA even though there is no mention of either the Operation Snowbird program or their aircraft.

13. PROPERTY VALUE

The methodology used regarding loss of property value due to D-M military overflights is too general and doesn't use accepted methods of evaluation. On Page FONSI-2 of the OSB DEA states "Property values near DMAFB have not experienced decreases as dramatic as those of other properties in the outlying portions of the City of Tucson or Pima County, suggesting that existing aircraft operations have not decreased property values compared to other properties in the local area." This is in contrast to the January 1, 2012 article in the Arizona Daily Star that states "The largest a number of houses sold under \$100K are found on the south side, surrounding Davis-Monthan AFB and near the Tohono O'odham Nation." http://azstarnet.com/real-estate/in-homes-here-sell-for-under-k/article_f957345a-a856-56bc-aa1e-46f8f27c3f29.html

The accepted method of evaluation of property value by both appraisers and assessors is to use the sales prices of comparable or similar properties. This methodology was used in 1994 Federal Aviation Administration study by consultant Booz-Allen & Hamilton. Similar properties (similar age, similar sq. footage, similar condition, etc.) were compared. The major difference being their location in a "quiet" neighborhood vs. a "noisy" neighborhood with airplane over flights. They demonstrated that in moderately priced neighborhoods in the vicinity of Los Angeles International Airport, noise diminished property values by 18.6%, or by 1.33% per decibel. A separate analysis, prepared for the Orange County Board of Supervisors, showed the diminution of property value averaged 27 .4% in the vicinity of the three California airports that were studied.

The Draft EA uses too wide a comparison of properties with Census Tracts vs. properties in Pima County. There is no back-up data on loss of property values. A thorough analysis of property and tax loss needs to be done in an EIS.

14. THE OSB EA BASELINE NEEDS TO REFLECT THE DATE OF CHANGE OF THE PROGRAM TO YEAR-ROUND COMBAT TRAINING FOR SISTER-SERVICES AND FOREIGN PILOTS

There was a significant change in the 1990's in the OSB program which impacted the human environment of the community surrounding Davis-Monthan AFB. Operation Snowbird changed from an ANG wintertime proficiency training program to a year-round combat training program for sister-service and foreign pilots. There was a major change in the type of aircraft that flew over the neighborhoods and the duration of the program. It became almost a quasi-commercial program (see attached brochure) that changed from mainly F16s and A-10s to include all types of aircraft....Harriers, Tornados, F-18s, F-15s, Osprey. When this major change took place there should have been an EA or EIS done to meet NEPA requirements.

15. THE POSITIVE ECONOMIC IMPACT OF OPERATION SNOWBIRD ON THE COMMUNITY IS MINIMAL

The positive economic impact of Operation Snowbird on the Tucson community is quite small in comparison to other influences i. e. tourism which could be jeopardized. During a MCRC meeting, the OSB economic impact was estimated to be less than \$300,000 annually. Neither the DM nor the 162nd Public Affairs Office was able to supply more exact figures. The Operation Snowbird campus was significantly expanded in 2000 to include living quarters therefore use of local hotels and motels is infrequent. DMAFB provides on-base food service, commissary, banking and recreational facility, etc. The EA mentions participants renting cars and eating out at local restaurants as a positive economic impact on P. 4-10. "These additional trainees would eat at area restaurants, rent cars, and in some cases may stay in hotels." This would unlikely be a significant economic impact on Tucson.

16. EXPANSION OF OSB WILL INCREASE THE RISK OF AN ACCIDENT IN A DENSELY-POPULATED AREA

It is obvious that doubling the number of OSB flights and adding night flights will also double the risk of an accident in a densely-populated area. The Table 3-10. Risk Factors for OSB Aircraft on P. 3-22 fails to include three of the OSB aircraft with the worst safety records: the F-18s, the F-22s, and the osprey

The EA fails to mention the December 2008 crash of an F-18 into a house in San Diego killing four on the ground. The pilot ejected safely. This aircraft was from Miramar MCAS, CA. Miramar's F-18s have participated in Operation Snowbird in the past. Another Miramar F-18 recently crashed at NAS Fallon.

Also, there is no mention of the recent crash of an F-18 into an apartment complex in Virginia Beach, Va. Despite extensive damage to the buildings and some injury to those on the ground, miraculously, there were no fatalities. The two pilots parachuted safely to the ground.

In 2000, an Osprey crashed in Marana killing 19 marines. MV-22 Osprey is listed as participant in the OSB Proposed Action on page ES-2.

In 2005, a Harrier from MCAS Yuma crashed into a City of Yuma neighborhood. The Harrier was carrying live ordnance and 1,300 people were evacuated. The pilots ejected safely and two people on the ground were injured. Harriers from MCAS Yuma have participated in Operation Snowbird.

The safety record of the F-22 has received much publicity. The Air Force claims that the problem with the air flow to the pilots has been corrected.

Many in Tucson haven't forgotten the crash of a D-M jet near the University of Arizona in 1978 <u>http://www.library.pima.gov/librarianfiles/?kbid=13</u> A 2003 article published in the University of Arizona's student newspaper, The Daily Wildcat, recaps the incident. Details about the accident, the pilot and victims involved, and the University of Arizona's reaction are included.

http://wc.arizona.edu/papers/97/44/01_1.html

Simply because there has not been a crash of a DM aircraft in Tucson in recent years, should not allow the Air Force to forget that the base is located in an urban area surrounded on three sides by residential development. The visiting Operation Snowbird pilots, who are unfamiliar with area, are give a short briefing and then they are expected to do precision flying over a densely populated area.

The words from the Davis-Monthan JLUS Section 5.1.2 "Safety" need to be remembered. "Although the risk to people on the ground of being killed or injured by a military aircraft accident is very small, such an event is by its nature of high consequence and may be catastrophic in the range and extent of its impact."

17. CONCLUSION

The OSB Draft EA is sorely lacking not only in detail, but in accuracy. A full EIS is clearly needed.

Anne Gomez 3455 E. Via Esperanza Tucson, AZ 85716

goanne@cox.net

(520) 297-1758

Please send me a copy of the Final Operation Snowbird EA. Thank you.

Peaceful Skies Coalition

c/o P.O. Box 322 Arroyo Hondo, New Mexico 87513

September 19, 2012

VIA E-MAIL

ATTN: OSB EA COMMENT SUBMITTAL 355th Fighter Wing Public Affairs 3180 S. First Street Davis-Monthan AFB, AZ 85707

Re: <u>Comments on the Draft Environmental Assessment</u> Proposed Update and Implementation of the National Guard Bureau Training Plan 60-1 in Support of Operation Snowbird, Davis-Monthan Air Force Base, Arizona.

To Whom It May Concern:

Peaceful Skies Coalition is submitting comments on the United States Air Force Draft Environmental Assessment for the Proposed Update and Implementation of the National Guard Bureau Training Plan 60-1 in Support of Operation Snowbird (OSB) in compliance with the National Environmental Policy Act of 1969, 42 U.S.C. § 4331, et seq., (NEPA).

These comments are submitted during the requisite comment period by the Peaceful Skies Coalition (Commenters). The Commenters request that Carol Miller, President of Peaceful Skies Coalition, be placed on the recipient list to receive notice of any developments in the USAF NEPA review process for this proposal and any related documents issued by the USAF in the course of its NEPA review of this proposal. The Commenters further request that these comments be included as part of the administrative record. Additional comments may also be submitted separately by members of this organization, its officers, and other interested citizens associated with the organization.

Peaceful Skies Coalition has commented to the USAF on several other NEPA issues. As each Draft EA or EIS is studied, coalition members have gained insight into the enormity of recent Air Forces expansions on the people, wildlife, range and farm animals, precious water, and land – all without truly informed consent.

Other commenters will address flaws in various sections of the Draft EA. Peaceful Skies Coalition is primarily addressing serious, fundamental problems with the Draft EA and the numerous ways in which it fails to meet the requirements of the NEPA.

Recommendation: Withdraw the Draft EA Document for Multiple Violations of NEPA

The Draft EA does not comply with the NEPA. The public is being asked to comment on environmental impacts of an expansion in isolation from all current and adjacent activities.

The Peaceful Skies Coalition is aware that a tremendous military expansion is underway within the United States and that the Air Force and other branches of the military are simultaneously conducting numerous Scoping Meetings, Public Hearings, Draft and Final EAs and Draft and Final EISs. In order to provide informed comment on the OSB Draft EA, the public needs information about the other current regional and national base expansions and changes. Without complete information there is no way to determine the actual impacts of the OSB expansion.

DOD Must Develop a Comprehensive Baseline for All of Its Activities

For the purpose of establishing a baseline from which to address cumulative affects, the Department of Defense (DOD) should initiate a Continent-wide EIS for all military flights and training, whether manned or unmanned, by any and all branches of the military and military contractors. Wildlife, water and air quality, and avian flyways are just a few of the potentially affected natural systems, which exist in very large bioregions not defined by lines drawn on a map around a single base.

For the fourth time, the Commenters have formally put in writing the request that the USAF diligently prepare a comprehensive programmatic EIS for all training areas, operations and activities in at least the lower 48 states and arguably in the Continent, including Alaska.

Council on Environmental Quality (CEQ) policy states that actions which are:

(1) closely related, i.e., are interdependent parts of a larger action and depend on the larger action for their justification; or (2) are cumulative actions, which when viewed with other proposed actions have cumulatively significant impacts; or (3) are similar actions that have similarities that provide a basis for evaluating their environmental consequences together, such as common timing and geography, need to be considered in one EIS. *See* 40 C.F.R. § 1508.25. Based on this policy, the numerous training areas and activities, or operations, throughout the western United States, and indeed the entire country, should be considered in one, single programmatic or comprehensive EIS.

Much of the information presented in the Draft EA violates this policy by providing no recognition of adjacent activities.

When viewed with other proposed actions, there are cumulatively significant impacts on human communities and wildlife populations and habitat. These projects qualify as "similar actions" that provide a basis for evaluating their environmental consequences together, such as common timing and geography. These projects therefore must be analyzed in one, national programmatic EIS.

Preparing a single comprehensive or programmatic EIS is the only way the USAF genuinely can explore and evaluate a reasonable range of alternatives with varying overflight frequency and

alternate locations, as well as alternative methods of training (including virtual flight simulation).

Commenters believe the DOD does not want the public to learn all of the negative environmental impacts of its activities. For example, we are aware that at one time the DOD had initiated a programmatic EIS for its entire low altitude training program on a nationwide basis, and then abruptly discontinued the process after early administrative drafts revealed the presence of very significant cumulative impacts across the country.

References and Self-Citation

The document as released is incomplete, inaccurate and overly reliant on old data. Stock references and citations – many decades old - are again included, apparently to try to make the document appear convincing and serious. An EPA noise study from 1974 is cited throughout the Draft EA, a study now thirty-eight years old! The public is offered the same citations in NEPA action, after NEPA action by the air force. It is time for current, relevant science and relevant new data regarding the cumulative impacts of plans for tremendously increased training programs.

Many of the references included are documents produced by the military, other parts of the federal government or federal contractors. None of these self-citations can be considered independent and, in fact, reveal a conflict of interest with the data used for this Draft EA.

Because of the poor quality of the document, it is possible to go through it section-by-section and critique each for flawed data, incomplete data, misrepresentations of fact, and failures to address significant requirements of NEPA. This comment from Peaceful Skies Coalition will not do a section-by-section critique, because the Coalition is aware of numerous technical and legal experts who are providing excellent comments on specific errors and omissions.

This Draft EA is Not in Compliance With NEPA

The USAF is required to comply with all of the requirements of NEPA assuring an independent and complete document is prepared for affected agency, tribal governments and the public. The statute requires that the following range of issues must be included and subjected to independent, in depth analysis:

Direct Impacts.

A NEPA-compliant EA must analyze the direct impacts of the proposed action. This includes but is not limited to: impacts to the health and socioeconomic and psychological wellbeing of Native American tribes, other residents of the area, and all those who live in and visit the proposed impacted areas from within the United States and around the world; impacts to livestock and other domestic animals; impacts to wildlife and wildlife habitat; impacts to wilderness areas, Areas of Critical Environmental Concern, and other environmentally sensitive areas; air quality impacts; impacts to archaeologically, anthropologically, historically, spiritually, and culturally significant areas, impacts to scenic areas, impacts to recreation areas; and impacts to tourism.

The area under consideration supports an abundant and diverse array of wildlife including prime

habitat for many species listed as threatened and/or endangered under the Endangered Species Act, and irreplaceable in many respects. The Draft EA fails to fully describe these potential threats or any mitigation plans to eliminate or limit the threats.

Indirect Impacts.

The NEPA review process is required to carefully analyze the indirect effects of the proposed action. Indirect effects are effects that are caused by the action but occur later in time or are further removed in distance. *See* 40 C.F.R. § 1508.8 (b). Indirect effects "may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems." *Id.* Here, the indirect effects shall include, but are not limited to, negative socioeconomic impacts, environmental injustice impacts, and the negative impacts to tourism, public health, hunting, and recreation that will result from the proposal.

The effects on the real estate market, both home and land values, could be devastating and, although raised repeatedly at the community meetings, are inadequately addressed in the Draft EA. The proposed basing of these flights is urban, within a heavily populated and growing city. Certain urban areas will be affected more than others and specific data is needed, not regional averages.

Cumulative Impacts.

The Commenters find that absolutely no attention was seriously paid to identifying or analyzing any cumulative impacts in the Draft EA. In fact, this failure to consider cumulative impacts was one of the weakest parts of the document provided to the public. It failed to take into account the requirements of cumulative impacts analysis in settled case law, regulation and policy.

The Federal courts have ruled that the government "cannot isolate a proposed project, viewing it in a vacuum."

Adjacent Area and Multi-State Impacts NOT Addressed:

While the Draft EA references other air force activities within Arizona, *Figure 1-2: Training Airspace in the Vicinity of Davis-Monthan AFB*, page 1-4 shows considerable airspace in New Mexico. Using the search function within the Draft EA, New Mexico never shows up a single time, despite impacts that might potentially occur there.

The Davis-MonthanTombstone MOA includes the entire boot heel of New Mexico, a region famous internationally as a birders paradise especially in the winter months when proposed OSB training expansions would occur.

Davis-Monthan's Reserve and Morenci MOA's, much of which are also located in New Mexico, are directly adjacent to the Holloman Cato MOA. The cumulative impacts caused by the adjacency of three MOA's must be addressed. In addition to Holloman, Kirtland and White Sands Missile Range activities should be part of the assessment to more accurately capture all of the requirements of NEPA, including wildlife, rangeland, bird migration, watershed and human impacts.

This failure to address cumulative impacts supports the request by the Commenters that the current Draft EA be withdrawn and a document in full compliance with law and policy be developed.

The NEPA review process requires taking a hard look at the cumulative impacts of the proposed action. A cumulative impact is "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." 40 C.F.R. § 1508.7.

Properly analyzing cumulative effects must include: (1) identifying the significant cumulative effects issues associated with the proposed action; (2) establishing the proper geographic scope for the analysis; (3) establishing an appropriate time frame for the analysis; and (4) identifying other actions affecting the resources, ecosystems, and/or human communities of concern.

Establishing the proper geographic scope or boundary for a cumulative impacts analysis is extremely important because the proposed action will have direct, indirect, and "additive" effects on resources *beyond the immediate* area. To determine the appropriate geographic boundaries for a cumulative effects analysis, therefore, the USAF environmental analysis should first: (1) determine the area and resources that will be affected by their proposed action (the "project impact zone"); (2) make a list of resources within that area or zone that could be affected by the proposed action; and (3) determine the geographic areas occupied by those resources outside the immediate area or project impact zone. In most cases, the largest of these areas will be the appropriate area for the analysis of cumulative effects. By way of example, for resident or migratory wildlife, the appropriate geographic area for the cumulative impacts analysis will be the species habitat or breeding grounds, migration route, wintering areas, or total range of affected population units. *See e.g., NRDC. v. Hodel*, 865 F.2d 288, 297 (D.C. Cir. 1988.

Another important aspect of a cumulative impacts analysis that the USAF will need to consider is an assessment of other past, present, and reasonably foreseeable actions affecting the resources, ecosystems, and/or human communities of concern. According to the CEQ, the "most devastating environmental effects may result not from the direct effects of a particular action, but from the combination of individually minor effects of multiple actions over time." Council on Environmental Quality, *Considering Cumulative Effects Under the National Environmental Policy Act* 1 (January 1997) *available at* http://ceq.hss.doe.gov/nepa/ccenepa/ccenepa.htm (last visited November 2, 2011). The requirement to consider cumulative impacts, therefore, is designed to avoid the "combination of individually minor" effects situation – to avoid the "tyranny of small decisions" or death by a thousand cuts scenario. *See e.g., Grand Canyon Trust v. FAA*, 290 F.3d 339, 346 (D.C. Cir. 2002).

The USAF must conduct a NEPA review that takes into account and analyzes state, private, and other federal actions as well as natural occurrences or events that have taken place, are taking place, or proposed to take place that will similarly impact the region's wildlife populations and

habitat, and human communities. Individually, each flyover – though serious – may not rise to the level of posing a significant risk. Collectively, however, the impacts of all of these and other activities – whether conducted by private individuals, state agencies, or other federal agencies – may be significant and must be analyzed. *See e.g., Grand Canyon Trust*, 290 F.3d at 346 (discussing collective impacts to Zion National Park); *NRDC v. Hodel*, 865 F.2d 288 (D.C. Cir. 1988). As the D.C. Circuit Court noted, federal agencies must "give a realistic evaluation of the total impacts [of the action] and cannot isolate a proposed project, viewing it in a vacuum." *Grand Canyon Trust*, 290 F.3d at 342. Even "a slight increase in adverse conditions . . . may sometimes threaten harm that is significant. One more factory . . . may represent the straw that breaks the back of the environmental camel." *Id.* at 343 (*quoting Hanly v. Kleindienst*, 471 F.2d 823 (2d Cir. 1972)).

The USAF cannot analyze the direct and indirect effects of the proposed expansion of Operation SnowBird in isolation, but must examine the cumulative effects of the proposed project together with all other Department of Defense training areas and operations in and around Arizona, New Mexico and all adjacent states. As explained below, this comprehensive analysis is required by NEPA and mandates the preparation of a programmatic EIS that addresses the entirety of training programs.

Synergistic Effects – It's Time for the Air Force to Use Current Science

Since the 1970's and 1980's, when several of the cited studies were completed, most areas of scientific study have become much more aware of synergistic effects; not only the synergy generated from a single project in isolation but also the synergistic effects of all other activities. The Air Force has tried to ignore synergy for too long. For any valid NEPA assessment or EIS, new independent, scientific research is needed to identify and quantify the synergistic effects of the current baseline and any future projects.

Among the areas of science, which are taking synergy seriously, are climate science, human health impacts, and wildlife studies to name only a few. Without considering synergistic effects, the Cumulative Impacts section of the Draft EA falsely assumes all effects to be only additive and therefore declares them minimal or nonexistent. In reality, these impacts are not only additive, but also have synergistic effects, which in many cases will reverse the conclusions expressed by the air force.

Establish a Baseline.

The USAF NEPA review process has not established in this Draft EA a proper baseline upon which to base its impacts analyses and conduct the requisite "trends analysis," i.e., an assessment of the environmental impacts of all activities affecting the various resources over an extended period of time. By failing to properly define the baseline and from the baseline engage in a trends analysis, the USAF will be unable to track any effects and changes that will occur over time. At a minimum, baseline data on locations of wildlife and migratory bird paths, and the current exposure of animal populations and human communities to sudden heightened noise levels (startle response) is needed in order to properly analyze the impacts (direct, indirect, and cumulative) of the proposed action.

Alternatives.

The USAF NEPA review process will need to consider a reasonable range of alternatives. Under NEPA, federal agencies must "study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources." 42 U.S.C. § 4332(2)(E); *see also* 40 C.F.R. § 1508.9(b). The discussion of reasonable alternatives section is the "heart" of any environmental analysis under NEPA. 40 C.F.R. § 1502.14. This standard has not been met.

<u>Best Scientific Information</u>. All agencies, including the USAF "shall insure the professional integrity, including scientific integrity, of the discussions and analyses in environmental impact statements." 40 C.F.R. §1502.24. Information "must be of high quality." 40 C.F.R. § 1500.1(b). Accurate "scientific analysis [is] essential to implementing NEPA." *Id.* The USAF failed to review and collect sufficient scientific data. As stated above, much of the data is old and/or unrelated to the specific project. This resulted in a Draft EIS that does not provide information sufficient to analyze the direct, indirect, and cumulative impacts of the proposed action.

Topics for study, which were not addressed at all include watershed impacts from accumulated perchlorates and other aircraft fuel pollutants, fire danger in drought-ridden forests, effects on wildlife and livestock. Additionally effects on current and future tourism in the Tucson region and renewable energy development must be studied.

<u>Socioeconomic Factors and Environmental Justice</u>. The preceding pages document a number of weaknesses and violations of statute, regulation and policy. The Draft EIS fails to establish a baseline, fails to consider cumulative impacts, and presents very limited science regarding potential impacts to humans or natural systems. Despite these significant, overall shortcomings, no section is as dismissive of impact as the Socioeconomic and Environmental Justice sections with insufficient provision for mitigating the impacts.

A comprehensive study of socioeconomic and environmental justice impacts is needed. The affected areas extend far beyond the minimal information provided about Pima County, where the base is located. Further study must consider impacts on the regional market/services level, many of which cross both state and county lines.

These comments are submitted by the Peaceful Skies Coalition on the Proposed Update and Implementation of the National Guard Bureau Training Plan 60-1 in Support of Operation Snowbird, Davis-Monthan Air Force Base, Arizona. The mission of the Peaceful Skies Coalition is to participate in this and other important decisions affecting public resources in United States.

In conclusion, we ask that this Draft Environmental Assessment be withdrawn and that the DOD first complete an EIS for all continental low, middle and high altitude flights both manned and unmanned for all DOD branches before attempting any changes to the current usage. We believe the public will be outraged to learn how much airspace, how many flights, how much pollution, and how much money is literally burned overhead by the DOD and that the public will demand that military airspace and training be reduced and not expanded.

We hope you find these comments to be helpful, informative, and useful in your efforts to comply with the NEPA and other substantive statutes. If you have any questions or comments, or wish to discuss the issues raised in this comment on the Proposed Update and Implementation of the National Guard Bureau Training Plan 60-1 in Support of Operation Snowbird in greater detail, please do not hesitate to contact the Peaceful Skies Coalition representative listed below.

Sincerely,

Carol mille

Carol Miller, President

On *Behalf* of:

Peaceful Skies Coalition P.O. Box 322 Arroyo Hondo, NM 87513

September 9, 2012

355th Fighter Wing Public Affairs 3180 S. First Street Davis-Monthan AFB AZ 85707

Re: ATTN: OSB EA COMMENT SUBMITTAL

Dear Sirs:

Thank you for the opportunity to comment on the Draft Operation Snowbird (OSB) Environmental Assessment. I am a resident of mid-town Tucson.

The draft EA seems to be extremely poorly prepared. The conclusion of a "finding of no significant impact" on our community is simply not demonstrated or supported. The EA has several gaps noted below in analyses and missing information in its attempts to assess the environmental impact of the OSB expansion on the surrounding Tucson community. NEPA law and procedures requires a "hard look" at the environmental consequences of the OSB expansion. This is clearly not accomplished. In addition, the proposed action will set a precedent for future expansions in terms of noise, health, and safety for the community. A complete Environmental Impact Statement (EIS) is obviously required.

Inaccurate History and Failure to Follow NEPA Procedures. In describing the history of the OSB since its last environmental analysis in 1978, the EA notes that a series of changes took place in the original OSB program of winter-proficiency training gradually over the years, principally in types of Air Guard aircraft involved. It fails to note that after 1995 more significant changes were introduced and culminated about the year 2000 into a major and significant change in OSB mission involving: (i) change of the type of training from winter-time proficiency to combat training; (ii) change from winter-time to full yeararound training; (ii) change from training ANG units to sister service and foreign pilots and aircraft. At this point, it became a major federal action significantly affecting the surrounding environment and required an environmental analysis under NEPA law. Specifically, bringing in Harriers, F-18s, and foreign allied aircraft (rather than A-10s) at low levels over populated neighborhoods would clearly expose residents to increased noise and safety-risk. It was also a clear change from the AF policy outlined in its 1978 letter to the Community after the last major fatal accident. The EA needs to discuss honestly and openly when the decision for this mission change was made and why no environmental analysis was ever undertaken.

The failure to recognize this OSB mission change, its significance, and the subsequent impact on the surrounding community allows the current draft EA to produce a conclusion of no significant impact on the proposed expansion of the previously changed OSB mission. Selection in the draft EA of a baseline year ("status quo") of 2009 air operations (several years after the mission change) to be used for comparison against the proposed EA expansion produces only a small change resulting from increased flights along with its resulting impact on the surrounding environment and community. The changeover from the original winter-proficiency program and its significant impact on the community is never

picked up. The environmental problem in the community noted in the draft EA is inappropriately minimized by selection of this baseline.

In addition, since the environmental problem is minimized, it allows the implementing agency to label the community's concerns for safety and noise as only a small increase and ignore a reasonable alternative of basing OSB at a less encroached airfield near the Goldwater Range. Such alternative airfields could include, among others, the Gila Bend Auxiliary Field, the Pinal Airpark, and Libby Air field.

A consequence resulting from the failure to acknowledge the original change of OSB mission and its impact on the community is the breakdown in relations between the Tucson community (particularly those under the flight path) and Davis-Monthan that has occurred since the change in 2000. Tucson neighborhoods became aware of the change several years after it was implemented when the aircraft appeared overhead. They continually inquired as to what the change was; eventually asked for a copy of the environmental analysis; and were continually stalled in receiving a clear unambiguous response.

Missing Environmental Justice Analysis. The EA correctly notes that under the current Operation Snowbird Program a disproportionate number of minority/low-income populations adjacent to the Base on the northwest are seriously affected by noise. This involves some 826 homes and 134 multifamily complexes. The FAA and the Air Force both consider such areas as "incompatible with residential use".

Executive Order 12898 (Environmental Justice) requires an analysis of "the environmental effects, including human health, economic and social effects of Federal actions" on the minority and low income community. The EA has no such analysis, including the results of doubling the number of flights on the impacted group of residents.

Missing Assessment of OSB Flight Patterns. The EA focuses only on residents within the DM noise contours. There is no discussion of safety and noise impacts of the low-level OSB flight pattern over populated mid-town and other neighborhoods northwest of DM. A chart of the flight pattern over City neighborhoods is also missing.

Incomplete Noise Analysis. The EA noise analysis leaves out the noisiest OSB aircraft – the F-18s, Harriers, and F-22s. It is based on a 2007 Noise Study which the public has never seen or been able to review. The highlights of that study should be included in the assessment and full copies available to the public as an appendix or separately.

Incomplete Safety Data. The safety analysis is based on a Table developed by DMAFB listing the risk factors for OSB aircraft. Neither the methodology nor the calculations are provided for public review. The calculated risk factors fail to take into consideration the full safety picture of the different types of aircraft being brought in at low level over heavily populated neighborhoods. For example, the F-15 fleet is at the end of its service life. One disintegrated unexpectedly three years ago on a training mission in Missouri. The whole fleet was grounded.

The Table also leaves out data on aircraft with worse safety records than the A-10 including: F-18s, F-22s, Ospreys. It only includes Class A mishaps, leaving out Class B and Class C mishaps. OSB aircraft must fly low-level approaches over populated residential areas to return to DM, where the loss of a simple bolt could be fatal to a resident below.

The only foreign aircraft included is the Tornado, leaving out data on the Mirage, Typhoon, Kfir, and Rafale.

Missing Analysis on Noise Contours. The analysis used for developing the noise contours in the EA is missing. There is a statement in the EA that an assumption was made that F-16C and F-15A aircraft were suitable substitutes for OSB aircraft. This is simple not a valid assumption for F-18s, Harriers, or F-22s.

Missing Economic Analysis. There is no attempt at an economic cost-benefit analysis in the EA. When economic issues are noted, they are ignored or mis-analyzed.

Tucson's premier economic engine is tourism, generating some \$2.02 billion in direct travel spending annually and 21,500 direct jobs. The EA notes that an unusually large number of comments expressed concern over OSB's effect on tourism. It then states that the impact on Tourism would be difficult to quantify (separating out the OSB impact from the total DM aircraft impact) so it simply ignores the issue. This is simply unacceptable for a City that relies economically on tourism and is striving to make itself a "tourist destination".

In discussing the effect on property values the EA makes generalizations based on changes in "census tracks" adjacent to the base. It never presents data breaking down those tracts. For example, if the track includes high-end properties outside of the noise contour (Colonia Solana) and low-end properties within the contour (Julia-Keen) an increase in average property values over time would occur but the conclusion that overflights had no effect on values would be incorrect. The accepted methodology for analyzing economic effects on property values is to examine two comparable properties, in a neighborhood within the noise contour and a neighborhood outside. Then, examine market prices over time. If necessary, the FAA has approved studies of selected neighborhoods around airfields in California which could provide suitable ratios for estimates.

Missing Impact Assessment on Children. There are at least four schools under the OSB flight pattern. They include The Griffen Foundation Charter School (elementary and middle school) in Julia Keen and Robison Elementary, Howenstine High School and St Ambrose Elementary in Arroyo Chico. Howenstine has children learning trade skills in outdoor construction programs. Executive Order 13045 (Protection of Children) requires an assessment of "heath risks and safety risks that may disproportionately affect children". No such assessment is included.

Incomplete Public Participation. The Air Combat Command refused to hold any public meetings on the draft Environmental Assessment, despite several requests. Three public scoping meeting were held initially which generated an unusually large number of comments for a routine environmental assessment at DM. Despite the fact that a major impact of the OSB falls disproportionately on the low-income/minority community no materials have been presented in Spanish to that community, despite several requests. At a minimum, the EA executive summary should have been translated. No public notices were made in Spanish, including the notices for the initial scooping meetings. The EA states that notices similar in number to the scoping meetings were sent advising the availability of the draft EA. This is not true.

In conclusion, it is clear that EA does not comply with NEPA procedures. The EA conclusion of a FONSI is not adequately supported. An EIS is required prior to making any decision to expand the OSB Program in Tucson.

Thank you.

Sincerely. Robin Gomez

3455 E Via Esperanza Tucson, AZ 85716

Tel: 520-297-1758



riend and former valuations and jobs nder scrutiny.

ounty officials privately say isations that Lang has taken backs in exchange for more table property valuations or for ting employees higher-paying could fall under the category ibery of an elected official. s such, the allegations are the iew of the FBI, which is the in-

ie torch



Lang

vestigative arm of the U.S. Attorney's Office, officials said.

Lang, who has denied the allegations, did not return phone calls seeking comment.

The accusations of kickbacks reportedly were initiated by a fired ex-employee and an ex-girlfriend of Lang's.

Assessor's employees, who declined to be identified for this story, said interviews conducted by the FBI have taken place in the Federal Building in downtown Tucson, located just west of the county government complex. The interviews are said to have lasted between one and three hours.

Those interviewed said the FBI started the investigation prior to

Lang's election in November 199 when then-Assessor Rex Wai briefed agents on perceived impriprieties and conflicts of interes The investigation fizzled then, by apparently it has been reopened i recent months, the sources said.

Waite, a Republican who wa defeated by Democrat Lang, is ou of town and unavailable for comment.

Lang has said he is the victim o employees retaliating against hin FBI, continued/8/

e of the 4,100 owell Park for a ceremonies and), a University of ing fire torches YONI POZNER/Tucson Citizen

into the hands of his partner, Angelo Romeo. Soccer players ages 8 to 16 on teams from Arizona, Texas, New Mexico, Utah and California will compete all weekend at "The Fort Lowell Shoot-out" at the park, 2900 N. Craycroft Road.

D-M area residents feel left out

 Many are saying nobody's asked them about building another runway and putting them at risk.

By CHRISTINA O. VALDEZ Citizen Staff Writer

Some residents living and working near Davis-Monthan Air Force Base are hopping angry, saying government officials are not listening to their concerns about plans to build a \$42 million runway at the base.

"We are being used as sacrificial lambs" in an effort to keep the base open, said Mark Mayer, 45, a community activist.

Tucson, backed by the state, supports building the runway to reduce noise and safety problems near the base's main existing runway. A bill calling for the state to spend about \$21 million in runway money, to be matched by city and Pinia County funds, during the next two fiscal years has been drafted, the governor's office announced yesterday.

The federal government next year places to come out with its list of latest planned military base closures, and city officials fear D-M will be high on the list unless "urban encroachment" near the existing runway is addressed.

"What will the total impact of the new runway mean?" Mayer asked in a recent interview. People living near the base say flights have increased in recent years, and they are afraid the noise and potential for accidents will get worse if a runway is added.

If it does get worse, Mayer said, people fear the response from state and local officials will be, "How dare you complain? The state has just spent \$42 million."

Residents have been "frozen out of the picture" by government when it comes to deciding the city's position on D-M, Mayer said.

Mayer has lived in the 3300 block of East 23rd Street – near the base – for seven years. His home, along with about 2,100 other homes and Keen Elementary School, is within D-M's potential-accident zone.

Tucson Citizen

Runway angers D-M neighbors

Continued from 1A

The Air Force defines zones at the end of runways where accidents are statistically more likely to happen. About 75 percent of all accidents occur within 10 miles of a base happen on the runway or within the zones.

The city's proposal is to build a second runway beginning 1,000 feet west and 7,000 feet southeast of the first, and to extend the existing runway. The existing runway would start 8,000 feet farther to the southeast and would be extended by 4,500 feet. The new runway would reduce the risk of a plane crashing into a neighborhood, city officials have said.

"We can live with the retention of D-M at a moderate level of operations. However, if the movement of the runway is not kept to a limited number of operations, it would be hard for us to support that with the levels of operation worse than they are now," Mayer said. Another D-M area resident, who

asked not to be identified, said, "The city and the D-M 50 (a group of Tucson business leaders who support the base) are selling to the people of this community that if D-M wasn't here, the city would dry up and blow away."

wears earplugs.

Principal Rose Garcia.

There are days teachers have to

stop talking in class because the

students can't hear, she said.

"What kind of damage is the noise

on a daily basis doing to the chil-

low-flying planes that go right over

the school's patio. "We do have an

evacuation plan in place in case a

public affairs officer for D-M, poli-

cies in the late 70s stated the base

would reduce the number of flights

over the downtown and University

area have been reduced by nearly

80 percent during some months,

flights over the city, and in 1993,

there were more than 18,700

Since then, flights in that same

In 1989, there were about 30,000

of Arizona area by 50 percent.

Rice said.

flights, he said.

According to 2nd Lt. Walt Rice,

Garcia is concerned about the

dren and faculty?" she asked.

plane crashes," she said.

said educators.

That, the resident said, is an exaggeration.

City officials denied ignoring residents.

Mayor George Miller, Gov. Fife Symington and Pima County supervisor Mick Boyd will be in Washington, D. C., to meet Tueslay with Air Force Secretary Sheia E. Widnall to discuss the runway proposal. Miller said that after he returns to Tucson, he plans to hold public meetings to discuss the design and financing of the runway.

Miller said runway construction would not start until he received word from the Air Force that D-M would remain open after 1995.

After a jet on its way to D-M crashed Oct. 25, 1978, just south of he University of Arizona, killing wo people on the ground, flights wer the city were cut to an averige of 13.6 daily, Mayer said.

"Now we get that in 20 minites," he said.

During a 30-minute interview Mayer said, "A half-dozen or so planes have flown over my house."

At Keen Elementary School, 1538 E. Ellington Place, about a nile from the D-M runway, the

But this year, the Air National noise level at times is excruciating, Guard Bureau out of Washington, D.C., decided to increase the num-"It hurts your ears, especially ber of flights in its Operation (when) outside. You feel the need Snowbird, Rice said. to want to cover your ears," said

Operation Snowbird started Jan. 23 and ends April 4. Eight squadrons from the Northeast train at D-M for two-week periods. With Operation Snowbird, D-M currently generates about 160 to 200 flights daily, Rice said.

"It takes them only two weeks' training in Arizona compared to what it would take them to accomplish in three months at their home," Rice said.

"That's a blessing and curse to this area where the sun shines 300 and some days a year. It's very favorable to train in," he said.

Rice also said the runway proposal is coming from some of the residents of Arizona. "It's not coming from the base. A lot of people are pointing the finger at us, but we are taking no action on it until a proposal is made to the civilian leadership of the military," Rice said.

Jessica Sampson, 44, of the 1900

XAVIER GALL

Jessica Sampson lives in the accident-prone area that Davis-Monthan Air Force Base has idfied. She says she has trouble sleeping because of jets flying over her home. She someti block of East Ninth Street

she's been awakened by jets over her home many times.

"It's very upsetting," espe if you work nights, she said.

Sampson, an engineer Southern Pacific Railroad talked to City Council me about the problem, but nothi been done, she said.

What scares Jack Brown, pilot who lives in El Encant tates in the Country Clut Broadway roads area, is that . new runway will do is mov problem over to someone home.

Brown said jets fly ove home at only about 1,000 above the ground. One day h three F-16 jets flying eve house and he could have . they were going to collide, he "They were so close toget slice of bread would barely fit

Brown has called D-M to plain about the heavy traffic head but he said it doesn't c good. "To them (D-M official civilian population is the 1 form of animal life on eartl said.

8A