

## WHAT (AND WHO) TO BELIEVE ABOUT THE F-35A BASING

Positions on the F-35A can be based on objective facts or subjective opinions. Listed below are the facts and opinions as stated by the opponents and supporters of the F-35A.

The facts, as stated by the opponents, come from government documents and professional health organizations, which are based on research and scientific studies. All references are cited.

The opinions come from ads, letters, and statements in the press from individuals. Since no source documents were provided to substantiate their statements, one can regard their views as being their own personal opinions or conjecture.

### *HEALTH AND LIFESTYLE*

#### Opinions

“I would unquestionably object to the potential F-35 basing in Vermont if I believed F-35 noise would make Winooski or South Burlington unlivable. But I don ’ t believe that will be the case. I am not willing to sacrifice any Vermont community for a new fighter jet...In fact, I support the F-35 because I believe its impacts, taken together, will make local communities *more* vibrant through increased investment.”

(Senator Patrick Leahy, June 22, 2012)

When asked by reporter, Mark Johnson “Is there anything you could hear that would change your mind and make you oppose this?” Leahy responded “Sure, if it was, if it came, if the report showed that this was a danger to our communities then, ah, of course, I would.”

(Senator Patrick Leahy, May 2013)

“...F-35 flight operations may represent 6 minutes of minimal inconvenience 4 days a week....”  
(Open letter in BFP, October 4, 2012, signed by Pomerleau, Davis, Boardman, MacKenzie, Russell, Nedde, Simoneau, Reilly, Fay, Weisburgh, Michaels)

#### Facts

“There is sufficient evidence from large-scale epidemiological studies linking the population ’ s exposure to environmental noise with adverse health effects. Therefore, environmental noise should be considered not only as a cause of nuisance but also a concern for public health and environmental health.”

(WHO p. xvii)

“There is overwhelming evidence that exposure to environmental noise has adverse effects on the health of the population.” (WHO p. 105)

“Noise is generally described as unwanted sound...Noise analysis thus requires assessing a combination of physical measurements of sound, physical and physiological effects, plus psycho- and socio-acoustic effects. The response of different individuals to similar noise events is diverse and influenced by the type of noise, the perceived importance of the noise, its appropriateness in the setting, the time of day, the type of activity during which the noise occurs, and the sensitivity of the individual.” (RDEIS p. 3-6)

“There are several points of interest in the noise annoyance relation. The first is DNL of 65 dB. This is a level most commonly used for noise planning purposes and represents a compromise between community impact and the need for activities like aviation which do cause noise. Areas exposed to DNL about 65 dB are generally not considered suitable for residential use. The second is DNL of 55 dB, which was identified by USEPA as a level ‘...requisite to protect the public health and welfare with an adequate margin of safety,’ (USEPA 1974) which is essentially a level below which adverse impact is not expected. The third is DNL of 75 dB. This is the lowest level at which adverse health effects could be credible (USEPA 1974). The very high annoyance levels correlated with DNL of 75 dB make such areas unsuitable for residential land use.” (DEIS p. C-14/15)

“...Federal Interagency Committee (Department of Defense, Transportation, Housing and Urban Development, Environmental Protection Agency, and Veterans Administration) published guidelines relating DNL to compatible land uses...In general, residential land uses normally are not compatible with outdoor DNL values above 65 dB...” (RDEIS p. C-12-13)

“The Air Force recognizes that some individuals may feel that they have experienced a reduction in quality of life; however, impacts to quality of life are not possible to quantify, since any potential measurement would be based on a set of subjective experiences that are highly variable among individuals. The EIS does provide several indicators, such as the percentage of the population that would be highly annoyed by noise, as an estimate to predict quality of life impacts.” (RDEIS p GO-17)

“The EIS quantifies areas and residential populations subject to noise levels of 65 dB DNL or greater in this manner because land use compatibility guidelines, as defined by FICUN and adopted by the DoD, indicate that residential areas subject to these noise levels would be considered incompatible unless additional noise level reduction measures were implemented. Individuals within areas designated as incompatible have an increased potential for annoyance....” (RDEIS p. GO-17)

“Other studies have reported hearing losses from exposure to aircraft noise.”  
(RDEIS p. 30)

“Since the CHABA (a NIOSH and USEPA commissioned group) report (in 1981), there have been further studies that suggest that noise exposure may cause hypertension and other stress-related effects in adults.” (RDEIS p. C-26)

## *NOISE-RELATED HEALTH AND COGNITIVE EFFECTS ON CHILDREN*

### Opinions

When asked by reporter, Mark Johnson “Is there anything you could hear that would change your mind and make you oppose this?” Leahy responded “Sure, if it was, if it came, if the report showed that this was a danger to our communities then, ah, of course, I would.”  
(Senator Patrick Leahy, May, 2013)

“If the CDC (Centers for Disease Control) or the Department of Education felt there was any impact on children...they would have closed down Chamberlin long ago.”  
(Pam Mackenzie, South Burlington City Council Chair, July 2013)

“...there will be no adverse health effects on citizens.”  
(Green Ribbon postcard, July 2013)

### Facts

“Children who were chronically exposed to aircraft noise...had modest (although significant) increases in blood pressure, significant increases in stress hormones, and a decline in quality of life.” (RDEIS p. 30)

“The research reviewed does suggest that environments with sustained high background noise can have variable effects, including noise effects on learning and cognitive abilities and reports of various noise-related physiological changes. “ (RDEIS p. C-28)

“In 2002 ANSI refers to studies that suggest that loud and frequent background noise can affect the learning patterns of young children. “ (RDEIS p. C-28)

“It is generally accepted that young children are more susceptible than adults to the effects of background noise. Because of the developmental status of young children (linguistic, cognitive, and proficiency), barriers to hearing can cause interference or disruptions in developmental evolution.” (RDEIS p. C-28-29)

“It has been suspected for many years that children’s learning and memory are negatively affected by noise. Over 20 studies have shown negative effects of noise on reading and memory in children...” (WHO p. 45-53)

“Exposure during critical periods of learning at school could potentially impair development and have a lifelong effect on educational attainment.”

(WHO p. 45-53)

“The Haines and Stansfield study indicated that there may be some long-term effects (to children) associated with exposure....” (RDEIS p. C-29)

“...there is increasing awareness that chronic exposure to high aircraft noise levels can impair learning. This awareness has led the WHO and a NATO working group to conclude that daycare centers and schools should not be located near major sources of noise, such as highways, airports, and industrial sites.”

(RDEIS p. 29)

“A growing body of scientific knowledge demonstrates that children may suffer disproportionately from environmental health risks and safety risks.”

(Executive Order 13045)

## *PROPERTY VALUES*

### Opinions

“In my opinion, based on local history, a subjective assessment that it will not have negative impact in the future can be made.”

(Brigadier General Steve Cray, Assistant Adjutant General-Air, 16 July 2012)

“We have concluded that the basing of the F-35 will not add any significant negative impact to real estate values...”

(Open letter in BFP, October 4, 2012, signed by Pomerleau, Davis, Boardman, MacKenzie, Russell, Nedde, Simoneau, Reilly, Fay, Weisburgh, Michaels)

A GBIC analysis of data over a ten-year period showed “that property values within the current 65 DNL area have followed and reflected the overall trend of the County and of the real estate markets outside of the 65 DNL areas.”

(GBIC letter to SB City Council Chair, 24 July 2012)

### Facts

“In general, residential land uses normally are not compatible with outdoor DNL values above 65 dB, and the extent of land areas and populations exposed to DNL of 65 dB and higher provides the best means for assessing the noise impacts of alternative aircraft actions.” (RDEIS p. C-13)

“The study concludes that noise by itself has been shown to decrease property values by a small amount.” (RDEIS p. SO-67)

“Property within a noise zone (or Accident Zone) may be affected by the availability of federally guaranteed loans. According to the U.S. Department of Housing and Urban Development (HUD), Federal Housing Administration (FHA) and Veterans Administration (VA) guidance, sites are acceptable for program assistance, subsidy, or insurance for housing in noise zones of less than 65

dB DNL, and sites are conditionally acceptable with special approvals and noise attenuation in noise zones greater than 65 dB DNL. ... HUD, FHA, and VA recommend sound attenuation for housing in the higher noise zones and written disclosures to all prospective buyers or lessees of property within a noise zone (or Accident Potential Zone). (RDEIS p. C49-50)

“One paper...suggested a 1.8 to 2.3 percent decrease in property value per dB (increase)...their reviews found that decreases in property values usually range from 0.5 to 2 percent per dB increase of cumulative noise exposure. “  
(RDEIS p. C-50)

“...the EIS acknowledges the potential and extent of noise from the F-35A has to affect property values.” (RDEIS p. GO-17)

Regarding the GBIC study: “The data on which the Winooski analysis rests are ‘extremely small’ and thus ‘statistically unreliable’ . In seven of the 10 years studied, no more than five residential properties changed hands (in Winooski). Only nine homes in (South Burlington) were sold to private buyers during the years included in the GBIC study....Over the past decade, the FAA has purchased about 90 houses in that designated excessive-noise zone. Subsequently, they were either demolished or slated for demolition.” Thus, virtually all of the homes used in the GBIC study were purchased with federal money for demolition *because* of the noise. Dozens of legitimate studies on the impact of airport noise on property values all come to the same conclusion: property values are damaged by high noise.  
(Allen & Brooks Inc.)

NOTE: “The appraisal of the property to be acquired shall disregard any decrease or increase in the fair market value of the real property caused by the project for which the property is to be acquired...”  
(FAA)

An analysis of 110 home sales in and outside the Burlington noise zone found the average difference in sale prices was 15% or \$33,534. Homes within the noise zones sold for 15% -- or on average \$33,534 -- less than comparable homes outside the noise zone. “The difference is identified as the average amount per property attributable to the negative impact of airport noise on residential property value.”  
(Larson Appraisal Company)

“The seller has a duty to disclose any issues he or she may be aware of....the seller should disclose any problems as truthfully and accurately as possible (on the Seller’ s Property Information Report—SPIR). The SPIR was developed by the Vermont Association of Realtors as a way to cut down on lawsuits by buyers against sellers. Whether or not a SPIR is filled out, if it is later discovered the seller was aware of problems and did not disclose them to the buyer, it could be considered misrepresentation or omission under Vermont Consumer Fraud Act, 9 V.S.A. 2451-2480” (Vermont Property Owners Report, Feb-March 2013)

“A real estate disclosure policy would be developed for land uses within the 65 dB DNL contour, and implemented through revisions to zoning ordinances (ROA Section II. C. 15). *Status: Not implemented. The Airport has not actively encouraged the use of Real Estate Disclosures for properties within the 65 dB DNL contour but will be working with the City of South Burlington and the City of Winooski in that regard.*” (FAA Part 150 Report p. 16)

## *NOISE LOUDNESS AND TIME*

### Opinions

“One fact that is known is that that the F35 will be somewhat louder during take-off for approximately six minutes a day, four days a week.”

(Brigadier General Steve Cray, Assistant Adjutant General, 16 July 2012)

“It’ s going to be similar to the annoyances and impacts we’ ve had with the F-16 for the past 25 years.”

(Brigadier Dick Harris, Assistant Adjutant General for Air, VTANG, June 6, 2013)

“...I do not believe that the F-35 is significantly louder than the F-16, especially when the afterburner is not deployed.”

(Governor Peter Shumlin, February 13, 2013)

“...the F-35 will create sound similar to the F-16, there will be 2,613 fewer operations per year...”

(Green Ribbon postcard, July 2013)

“Cioffi said he did not think the noise level of the F-35 would be any different from that of the F-16s that the new jets would replace, based on research by GBIC and on his own personal observation. ‘The two aircraft are so similar that we expect the experience of the F-35 to be the same as the F-16.’

(Frank Cioffi, Greater Burlington Industrial Corp. President, June 4 2013)

“...F-35 flight operations may represent 6 minutes of minimal inconvenience 4 days a week....”

(Open letter in BFP, October 4, 2012, signed by Pomerleau, Davis, Boardman, MacKenzie, Russell, Nedde, Simoneau, Reilly, Fay, Weisburgh, Michaels)

### Facts

“Table 6.7 in the Executive Summary shows the F-35A would be between 17 dB and 20 dB greater in SEL and between 21 dB and 25 dB greater in L<sub>max</sub> than the F-16 during takeoff and arrival, directly over the receiver at an altitude of 1,000 ft and at an altitude of 1,500 ft over the receiver on a downwind leg of a local pattern operations. As explained in Appendix C, Section C1.1 a change in (single-event) sound level of 10 dB is usually perceived by the average person as a doubling (or halving) of the sound’ s loudness. Concur regarding sound pressure doubling with every 3 dB change and by a factor of 10 for every dB change.”

(RDEIS p. NS-40)

“The effect of the reduction in flight operations (referring to scenario 2) would be offset by the F-35A producing a single-event departure SELs 17 dB greater than the F-16s at Burlington AGS...”

The contribution of civilian aircraft would be negligible compared to the military aircraft contribution.” (RDEIS p. BR4-33)

“The effect of the reduction in flight operations (referring to scenario 1) would be offset by the F-35A producing a single-event departure SELs 7 to 17 dB greater than the F-16s at Burlington AGS...The contribution of civilian aircraft would be negligible compared to the military aircraft contribution.” (RDEIS p. BR4-28)

“A change in sound level of about 10 dB is usually perceived by the average person as a doubling (or halving) of the sound’s loudness, and this relation holds true for loud sounds and for quieter sounds. “ (RDEIS p. C-2)

“The cumulative nature of DNL means that the same level of noise exposure can be achieved in an essentially infinite number of ways....Areas exposed to noise levels between DNL 65 dB and 75 dB are “normally unacceptable,” and require special abatement measures and review. Those at 75 dB and above are “unacceptable” except under very limited circumstances.” (FAA Part 150 Report p. 5)

Pages C1 through C58 of the RDEIS explain noise, noise modeling, noise metrics, and noise effects. Damage from noise is based on amplitude, frequency, time averaging, maximum sound level, peak sound level, sound exposure level, equivalent sound level, day-night average sound level, number of events above a threshold level, time above a specified level, duration, intensity, unpredictability and the cumulative effect of the noise. (RDEIS p. C1-58)

“USEPA (in 1974) identified DNL of 55 dB as ‘requisite to protect public health and welfare....’ (RDEIS p, C-18)

“When considering intermittent noise caused by aircraft overflights, a review of the relevant scientific literature and international guidelines indicates that an appropriate criteria is a limit on indoor background noise levels of 35 to 40 dB Leq, and a limit on single events of 50 dB Lmax.” (RDEIS p. C-20)

“The Time Above (TA) metric quantifies the amount of time the noise level would be equal to or greater than a selected threshold Maximum Sound Level (Lmax); but the DoD noise model used for this EIS is not yet capable of estimating TA. The EIS provides Maximum Sound Level (Lmax) data for the F-35 and F-16; Table BR3.2.1 as an example.” (RDEIS p. NS-32)

“There are several points of interest in the noise annoyance relation. The first is DNL of 65 dB. This is a level most commonly used for noise planning purposes and represents a compromise between community impact and the need for activities like aviation, which do cause noise. Areas exposed to DNL about 65 dB are generally not considered suitable for residential use. The second is DNL of 55 dB, which was identified by USEPA as a level ‘...requisite to protect the public health and welfare with an adequate margin of safety,’ (USEPA 1974) which is essentially a level below which adverse impact is not expected. The third is DNL of 75 dB. This is the lowest level at which adverse health effects could be credible (USEPA 1974). The very high annoyance levels correlated with DNL of 75 dB make such areas unsuitable for residential land use.” (DEIS p. C-14/15)

## *JOBS AND THE ECONOMY*

### Opinions

“Basing the F-35A in our state would create jobs, spur economic growth, and increase investment opportunities for Vermont businesses.”

(Governor Peter Shumlin, February 13, 2013)

“Job losses are always hard, but it is important to remember that Vermont currently has the third lowest unemployment rate in the country. Many employers in Vermont are ready to hire those with the skills and education....”

(Governor Peter Shumlin, June 12, 2013 regarding the IBM layoffs)

“My opinion on the F-35 has not changed...All I can tell you is my support for the F-35 is based upon the thousands of jobs it creates.”

(Governor Peter Shumlin, June 4, 2013)

### Facts

“Under ANG Scenario 1 there would be no net change in the number of military personnel. Therefore, there would be no change to military payrolls or any subsequent impacts to regional employment or income ...Additional taxes would accrue...as a result of the increase on construction activities. These impacts, while beneficial, would be minor.” (RDEIS p. BR 4-77)

“ANG Scenario 2 would result in an increase of 266 military personnel: an increase of 83 full-time and 183 part-time traditional guardsmen...Traditional guardsmen generally hold full-time jobs outside the ANG and train at least one weekend per month and two additional weeks per year with the ANG. ...As any increases in secondary employment as a result of the increase in personnel would also be minor and ....would not affect short-or-long-term regional employment and income trends.... Additional taxes would accrue...as a result of the increase on construction activities. These impacts, while beneficial, would be minor (RDEIS p. BR4-78-79)

MG Dubie said that the Air Guard would *lose* maintainer jobs if the F-35A were to be based at the VTANG. At least half of the full-time Air Guard jobs are maintainer jobs.

(Public Hearing, April 19, 2010 at the 45-minute period of the hearing)

## *MITIGATION OF THE NOISE*

### Opinions

“We feel strongly that we can mitigate those impacts (noise problems) by working with the community on the noise issues.”



(Brigadier Dick Harris, Assistant Adjutant General for Air, VTANG, June 6, 2013)

### Facts

“Land acquisition and relocation is the only alternative that would eliminate the residential incompatibility.” (FAA Part 150 Report p. 29)

“...noise barriers provide little, if any reduction, of noise from aircraft that are airborne and can be seen over the barrier.” (FAA Part 150 Report p. 35)

“Therefore noise barriers are not recommended for inclusion in the Part 150 program at this time.” (FAA Part 150 Report p. 36)

“Therefore, soundproofing is considered the least desirable alternative for addressing sound in residential dwellings.” (FAA Part 150 Report p. 46)

“...the Air Force and Air National Guard have no plans to acquire or demolish residences as part of the F-35A beddown.” (RDEIS p. BR4-17)

“...the Burlington AGS would continue to undertake the voluntary restrictions outlined in the Burlington Noise Compatibility Program Update (BTV NCP 2008). The F-35As would maintain the quiet hours, keep within the specified arrival and departure routes and procedures, as well as ensure that single F-35A flights are flown out of the airport as opposed to simultaneous (or formation) takeoffs.” (RDEIS p. BR4-17)

“No other extra-ordinary mitigation measure are required beyond those prescribed under existing federal and state laws, regulations, and permit requirements to minimize, avoid, or reduce impacts.”  
“ (RDEIS p. BR4-18)

“...the Air National Guard is one of the dominant noise contributors to the DNL contours, as documented in the August 2006 NEW Update...”  
(FAA Part 150 Report p. 21)

## *FUTURE OF THE VERMONT AIR GUARD*

### Opinions

“...over six hundred members of the Air Guard live in the surrounding communities of the airport...and there are over four hundred full time jobs and six hundred part time jobs at the VT Air Guard.”  
(Brigadier General Steve Cray, Assistant Adjutant General, 16 July 2012)

“I would rather protect the mission of the citizen soldiers of the Vermont Guard and maintain 1,100 jobs here in Vermont rather than in South Carolina or Florida.”  
(Senator Bernie Sanders, April 20, 2013 and July 26, 2013)

“The Vermont Air National Guard is a key driver of Vermont’s economy with 1,500 jobs currently attributable to its strong presence.”

(Representative Peter Welch, July 26, 2013)

“Although I cannot predict what will happen to the Air Guard if the F35 is not based in Vermont, I can definitely say that the unit’s mission will be different and most likely will require a lot less personnel.”

(Brigadier General Steve Cray, Assistant Adjutant General, 16 July 2012)

## Facts

“Therefore, if there is no F-35A operational beddown at Burlington AGS the current mission would continue.” (RDEIS p. PA-47)

“At each location, there are on-going and currently planned activities and programs that would continue, whether or not the location is chosen for beddown of the F-35A operational aircraft.” (RDEIS p. 2-29)

“The Air Force plans to upgrade all 1,018 of its F-16s and 175 F-15C/D Eagles to keep them flying until the F-35A joint strike fighter is fully operational and new weapons systems on the F-22 Raptor are installed, according to the 2014 budget request released April 10. In the fiscal 2014 budget request, the Air Force states the service life extension for all F-16s will add eight to 10 years to each airframe, along with upgrades to the fighter’s radars, cockpit displays and other communications interfaces.” (Air Force Times, April 23, 2013)

“The Air Force is already using service life extension programs to keep F-16s flying while the F-35A are delayed. These jets have seen extensive use in Iraq and Afghanistan and will continue to fly until at least 2030 while the F-35As stand up.” (Air Force Times, May 13, 2013)

## *POLITICAL INFLUENCE*

### Opinions

“I feel strongly that none of our state’s Congressional delegation should put our fingers on the scale. All Vermonters deserve to be heard, and I do not want to tamper with the fair and open public comment process.”

(Senator Patrick Leahy, June 22, 2012)

“What I’ ve seen of it, there’ s nothing that changes my mind.”  
(Senator Patrick Leahy, June 4, 2013, responding to the Revised Draft EIS)

“My opinion on the F-35 has not changed...All I can tell you is my support for the F-35 is based upon the thousands of jobs it creates.”  
(Governor Peter Shumlin, June 4, 2013)

### Facts

“Other basing factors include, but are not limited to; aircraft production, government budget constraints, national defense policy and political considerations.” (RDEIS p. PI-54)

“Prior to the scoping meetings, the Air Force initiated contact with possible interested and affected government agencies, government representatives, elected officials, and interested parties in the states potentially affected...” (RDEIS p. 1-8)

“The Air National Guard and the Air Force are working with local and state officials to address specific questions and issues associated with the proposed basing of the F-35A at Burlington International Airport.” (RDEIS p. PI-51)

“...federal, state and local agencies, as well as members of the public, are invited to comment on the Draft EIS.” (RDEIS p. PI-55)

### Source documents for facts:

WHO: World Health Organization: Burden of Disease from Environmental Noise, 2011

DEIS and RDEIS: Revised 2013 Draft (and 2012 Draft) United States Air Force F-35A Operational Basing Environmental Impact Statement

Executive Order 13045: Presidential Order on the Protection of Children from Environmental Health Risks and Safety Risks, 2003

USEPA: U.S. Environmental Protection Agency

FAA: Federal Aviation Administration

Vermont Property Owners Report

Air Force Times

Allen & Brooks, Inc.

Larson Appraisal Company (July 2013)

**Source documents for opinions:**

GBIC Report (July 2012)

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The facts come from government and health care organizations. The U.S. Air Force Environmental Impact Statement took years to prepare, and millions of dollars to complete. It was prepared by “resource and technical experts in their various fields as noted by their education and years of experience.” (RDEIS p. PI-54) The WHO report contains over 300 scientific meta-analysis studies, which then underwent peer reviews.

The opinions come from those who would benefit economically or politically from the F-35A basing.

**The opinions contradict the facts. Both cannot be correct.**

Believe government and health organizations -- or politicians, big businesses, and developers.

It is your choice. Make an informed one. (August 2013)