

# F-35A Training Basing

## ENVIRONMENTAL IMPACT STATEMENT



### SUMMARY OF ENVIRONMENTAL IMPACT ANALYSIS

The U.S. Air Force has prepared a Draft Environmental Impact Statement (EIS) to assess the potential environmental impacts of its proposal to establish a Pilot Training Center with F-35A training aircraft at one or more existing Air Force or Air National Guard installations within the continental United States. The Draft EIS presents potential environmental consequences for four basing alternatives: Boise Air Terminal Airport Air Guard Station (AGS), Holloman Air Force Base (AFB), Luke AFB and Tucson International Airport AGS.

This fact sheet includes a brief summary of the potential impacts on environmental resources from the proposal, specifically for Luke AFB. For information about environmental impacts on the other basing alternatives or for more detailed information about possible impacts from F-35A training at Luke AFB, please refer to the Draft EIS, available at [www.F-35ATrainingEIS.com](http://www.F-35ATrainingEIS.com).



### Luke Air Force Base (AFB)

Luke AFB, located near Phoenix, Arizona, is an active-duty F-16 training base and home to the 56th Fighter Wing and four tenant units. Home to generations of fighter aircraft since 1941, Luke AFB currently

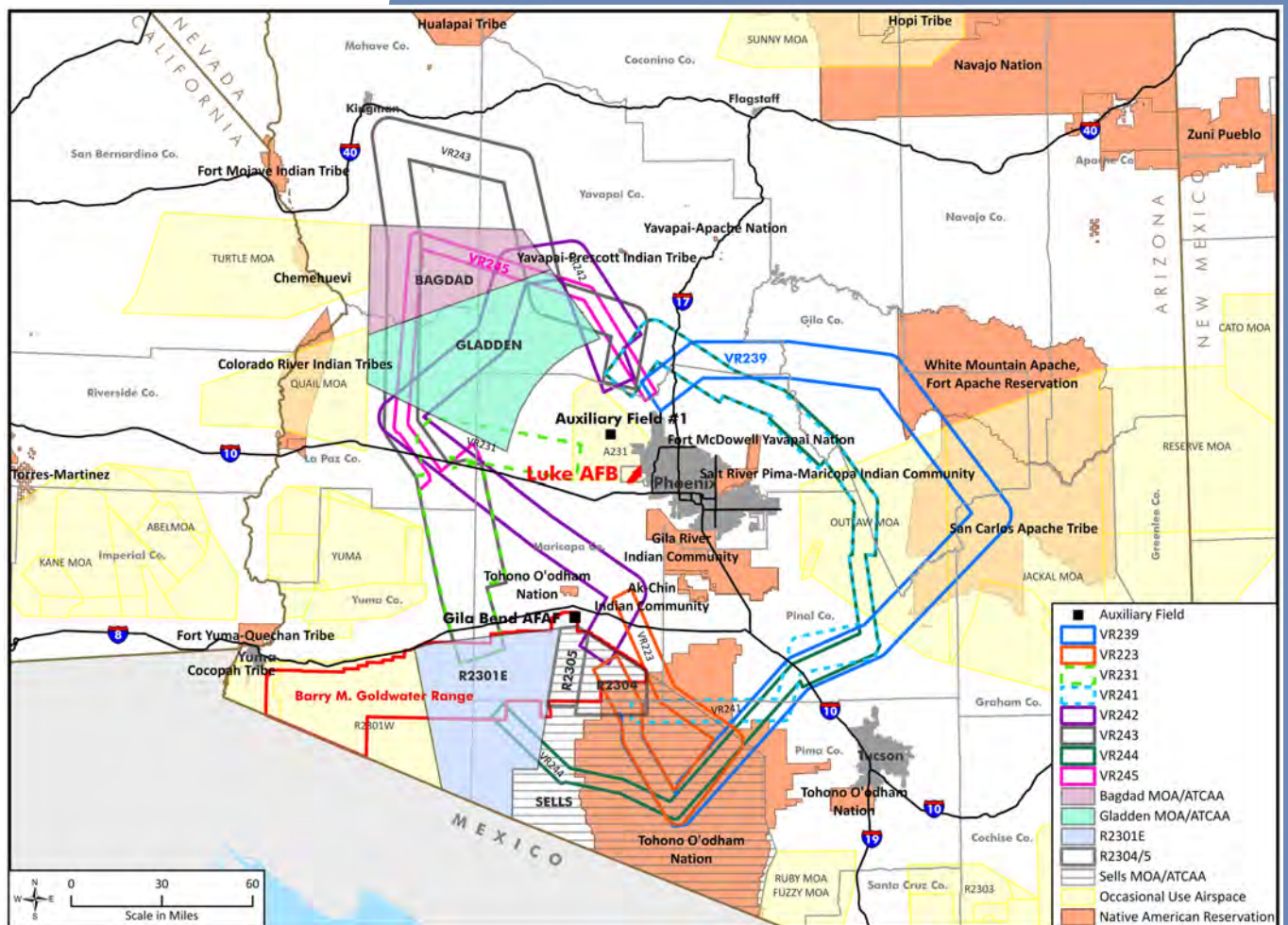
has a base population of 5,900 active duty military personnel and Department of Defense civilian employees and 15,000 family members. The number of F-16s at Luke AFB has been steadily decreasing due to force reduction over the past decade.

Integral to the pilot training mission at Luke AFB is the 1.8 million-acre Barry M. Goldwater Range (BMGR). The BMGR complex enables more than 50 aircrews and aircraft to simultaneously operate on the range. Combat pilots from the Air Force, U.S. Army, U.S. Navy and U.S. Marine Corps – active duty, reserve and National Guard – train on the BMGR.

For more information about Luke AFB, please visit [www.luke.af.mil](http://www.luke.af.mil).

**At this time, the U.S. Air Force's Preferred Alternative is to base the Pilot Training Center with 72 F-35A training aircraft at Luke Air Force Base. However, no decisions regarding the proposal will be made until after the environmental impact analysis process is complete.**

Figure 1: Training Airspace and Ranges at Luke Air Force Base



# DRAFT ENVIRONMENTAL IMPACT STATEMENT



The Air Force analyzed potential environmental consequences associated with changes in personnel, construction or renovation of base facilities, and training activities in existing military airspace, ranges and at auxiliary airfields to support F-35A training aircraft based at Luke AFB. Environmental resources identified by the public and agencies and addressed in the Draft EIS are summarized here.

For more detailed information about the analysis of resources and potential environmental consequences, please refer to the Draft EIS at [www.F-35ATrainingEIS.com](http://www.F-35ATrainingEIS.com).

The Air Force assessed basing up to 144 F-35A training aircraft at Luke AFB. The environmental analysis was conducted using the basing scenarios presented in Table 1.

**TABLE 1. LUKE AFB AIRCRAFT BASING SCENARIOS**

Aircraft Scenario	F-35A*	F-16	Total Aircraft
Baseline Condition	0	168	168
L1	24	26**	50
L2	48	26	74
L3 (Preferred Alternative)	72	26	98
L4	96	26	122
L5	120	26	146
L6	144	26	170

\* All basing scenarios used increments of 24 aircraft.

\*\* Some F-16s currently stationed at Luke AFB are programmed for retirement; 26 F-16 aircraft would stay at Luke AFB with remaining F-16 training squadrons relocated.

Environmental resource categories evaluated in the Draft Environmental Impact Statement for each alternative installation include:

## Aircraft Operations

- Airspace Management and Use
- Noise
- Air Quality
- Safety (ground, airfield and explosives)

## Natural Resources

- Soils and Water (soils, surface water, floodplains and groundwater)
- Vegetation and Wildlife
- Wetlands and Aquatic Communities
- Threatened, Endangered and Special Status Species



## Cultural and Traditional Resources

- Archaeological, Historic Architectural, Traditional and Native American Concerns

## Human Resources

- Land Use and Recreation
- Socioeconomics
- Environmental Justice and Protection of Children

## Community and Infrastructure

- Infrastructure
- Transportation
- Hazardous Materials and Waste

## Noise

Noise, defined as unwanted sound, could affect several resource areas. For more information on the methods used to assess and quantify noise impacts and detailed results, please see the Noise section in the Draft EIS (Chapter 4, Section LU 3.2 Noise). The Air Force would continue to adhere to all existing Federal Aviation Administration (FAA) and local avoidance procedures, flight restrictions, scheduling adjustments and other practices designed to reduce aircraft noise.

Noise levels were analyzed at noise-sensitive locations, such as on- and off-installation schools, hospitals and places of worship. The analysis indicates that the number of off-installation residents affected by noise levels greater than 65 decibel (dB) day-night average sound level (DNL) would decrease under Basing Scenarios L1 through L3, but would increase by an estimated 622, 1,615 or 3,739 people under Scenarios L4, L5 or L6, respectively.

The number of off-installation persons exposed to outdoor noise levels greater than 80 dB DNL would increase from currently two persons up to 14 persons under Scenario L6. Continuous exposure to

noise levels above 80 dB DNL could increase the risk of hearing loss.

The number of residents affected by noise levels greater than 65 dB DNL in the vicinity of Gila Bend Air Force Auxiliary Field (AFAF) would increase from three to up to 15 persons under Scenarios L2 through L6. For Luke AFB Auxiliary Airfield (Aux-1), the number of residents affected by noise levels would decrease under all scenarios, except Scenario L6. Persons exposed to increased noise levels may experience increased annoyance and interference with indoor speech, even if windows are closed.

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**Day-night average sound level (DNL)** is a noise level, averaged over a 24-hour period with an adjustment for late-night noises. **Sixty-five decibel DNL** is a threshold above which certain land uses, such as residential, are not considered compatible by the Federal Aviation Administration or the Air Force without measures to ensure that interior noise level goals are met.

A small percentage of F-35A aircraft operations would occur after 10:00 p.m. The percentage of persons awakened at least once per night would decrease under all scenarios at all of the locations studied.

F-35A training operations would increase subsonic noise levels by up to 16 dB DNL under training airspace. The average number of sonic booms per day would decrease or remain the same under all scenarios. Live and inert weapons training would also be conducted at the BMGR (see Figure 1), but would not result in significant noise impacts.

### ***Air Quality***

Air quality is described by the concentrations of various air pollutants in the atmosphere. The Air Force would continue to implement protective measures, including, but not limited to: limiting soil exposure for long periods of time during construction activities, employing dust control and soil retention practices, and employing, where feasible, construction equipment emission control measures.

Each F-35A basing scenario would reduce operations emissions of pollutants from baseline conditions. Since each basing scenario would not exceed air quality standards, F-35A operations would produce less than significant impacts on air quality. Construction activities would produce annual emissions well below conformity or threshold measures and would therefore result in less than significant impacts.

### ***Safety***

F-35A training aircraft operations would be conducted in existing airspace and in a manner similar to current operations. The Air Force anticipates no increase in safety risks associated with aircraft mishaps. Emergency and mishap response plans would be updated to include necessary procedures and response actions specific to the F-35A aircraft.

***Ground Safety:*** Basing scenarios are not expected to create new or unique ground safety issues. Construction, operations and maintenance procedures would not change from current conditions and all activities would continue to be conducted

in accordance with applicable regulations, technical orders and standards.

***Airfield Safety:*** F-35A aircraft would operate at Luke AFB similar to F-16 training aircraft. No increase in safety risks is expected.

***Explosives Safety:*** Ordnance would continue to be handled in accordance with Air Force and Department of Defense directives, and would not result in any greater safety risk. No significant impacts related to explosives safety are anticipated.

***Airspace Safety:*** No increase in safety risks is anticipated. Munitions and defensive flares would be deployed at approved ranges and airspaces. Measures to reduce the potential for wildland fire would continue to be implemented. Fuel dumping in emergency situations would be conducted in accordance with FAA procedures. Continued use of the Avian Hazard Advisory System, Bird Avoidance Model and pilot briefings would identify avoidance areas and minimize risks from bird-aircraft strikes.

### ***Vegetation and Wildlife/Threatened, Endangered and Special Status Species***

Construction and demolition activities would occur in developed portions of the installation. Measures to control erosion and siltation would be included with project implementation. Revegetation of temporarily disturbed areas would minimize the potential for erosion and dust generation, and decrease the duration of temporary habitat loss. Surveys would be conducted before demolition and removal of abandoned buildings to determine if nesting birds, federally or state-protected plants, or sensitive bat species are present. No long-term effects on vegetation and wildlife are anticipated.



As with current operations, low-level overflights and associated noise, sonic booms, munitions expenditures, flares and bird-aircraft collisions could impact biological resources. Based on the low percentage of time spent in low-level flight and current exposure of wildlife by other aircraft, no significant adverse effects on vegetation or wildlife from overflights, noise or other training activities are anticipated.

No known federally listed threatened or endangered wildlife species or their habitats occur on Luke AFB. Therefore, no adverse effects on federally listed wildlife are anticipated. Proposed airfield operations are similar to current operations and are not anticipated to cause significant impacts on special status wildlife that occur on Luke AFB.

The potential for adverse effects of F-35A training on endangered, threatened or special status wildlife is minimal. Although it is possible for a federally listed wildlife species to exhibit a temporary response, it is unlikely that such a response would adversely affect the survival or fertility of the individual or population, or approach the level of "take" as defined in the Endangered Species Act.

### ***Archaeological, Historic Architectural, Traditional and Native American Concerns***

Consultations with Native American tribes are ongoing regarding airspace actions. National Historic Preservation Act Section 106 consultation would take place regarding visual and other potential cultural impacts.



## Land Use and Recreation

F-35A aircraft basing would require construction and modification of facilities within Luke AFB. Activities would incrementally increase under Basing Scenarios L1 through L6. New or modified facilities would be designed and sited to be consistent with the installation master plan, airfield safety guidelines and related planning programs so that projected development would be compatible with surrounding land uses.



Total land area affected by noise levels of 65 dB DNL or greater would decrease under Scenarios L1 or L2 and would increase under all other scenarios. Several land use types, including residences without adequate sound attenuation, are considered incompatible with noise levels greater than 65 dB DNL.

Noise levels and potentially incompatible land uses in the vicinity of Gila Bend AFAF would increase under all basing scenarios. Noise levels in the vicinity of Aux-1 would decrease under most scenarios.

Subsonic and supersonic aircraft noise would decrease from baseline conditions under all training airspace. F-35A pilots would comply with all existing restrictions on supersonic and subsonic flight. Noise levels at recreational locations would remain generally compatible with recreational land use.

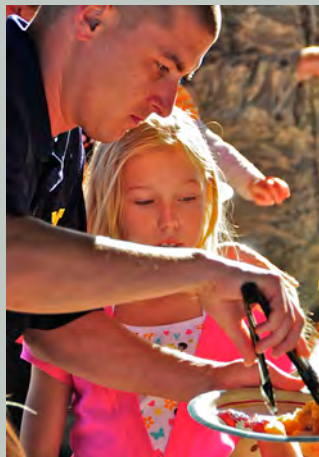
**F-35A flight training activities would take place in existing military airspace. No modifications to airspace would be required. Proposed training activities would be consistent with existing airspace operations and would comply with established range and land management plans.**

## Socioeconomics

Under the various basing scenarios, between 1,532 to 2,657 new construction jobs are anticipated. Under the Preferred Alternative (Scenario L3), an estimated 2,290 construction jobs would be created, 299 operational positions at Luke AFB would be added, and approximately \$17 million in tax revenues would be added to the regional economy.

The current housing market for available homes could accommodate potential increases in population. The number of school-aged students would increase by 685 under Scenario L3. Schools are anticipated to have sufficient capacity to accommodate an increase in school-aged children, but there may be need for additional teachers.

Property value is defined by qualities of the property itself, surrounding properties and the local real estate market. Noise generated by F-35A operations could have an adverse impact on property values for those properties newly exposed to noise levels greater than 65 dB DNL.



## Environmental Justice and Protection of Children

The high number of minority persons near Luke AFB results in a potential for disproportionately high and adverse effects on minority populations under Basing Scenarios L1 and L2. As more people are impacted by off-installation noise under Scenarios L3 through L6, the relative population of minorities is reduced; therefore, there would be no disproportionate effect on minorities. No disproportionate effects are expected for low-income populations in areas surrounding Luke AFB under all scenarios. Noise levels generated over schools and child care centers may have potential adverse effects on children for all scenarios except L1. Noise attenuation measures could be applied to impacted schools and child care centers to address potential adverse noise impacts.

Current flight restrictions would continue. With the exception of areas overflowed by Visual Route (VR)-223 (see Figure 1), no disproportionately high and adverse effects are expected for minority or low-income populations under Luke AFB airspace or in the areas surrounding Aux-1 or Gila Bend AFAF. For areas overflowed by VR-223, noise levels would increase substantially between baseline conditions and Scenario L6.

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