**LUKE AIR FORCE BASE FLIGHT OPERATIONS AND NOISE**

The United States Air Force is committed to being a good neighbor. We appreciate the

support we receive from the local community. The following information is designed to

improve your understanding of Luke Air Force Base flying operations. The information is

intended to give you an appreciation for why we fly and where we fly, and includes a Question

and Answer section of the most commonly asked questions we receive. Public safety and ensuring our ability to perform the mission of training the world’s greatest F-35 and F-16 pilots is our top concern.

**THE MISSION**

Luke is the largest fighter wing in the world with over 79 F-16s and 35 F-35s assigned. We trained more than 306 pilots last year, many of whom are student pilots who came to this base straight from pilot school to receive intense training on the F-16. These pilots graduate from Luke and proceed to combat assignments throughout the world. Luke is also the international training hub of the Air Force’s most technologically-advanced fighter aircraft: the F-35.

In addition to training fighter pilots, Luke Airmen are deployed around the world in support of several contingency operations protecting U.S. interests abroad. Luke AFB trains more than 50 percent of the USAF's fighter force and 90 percent of its F-16 pilots. Nearly every F-16 pilot flying in overseas theatres was trained at Luke AFB. The F-16 represents the most fundamental form of Air Superiority, Global Attack, Rapid Global Mobility, and Precision Engagement. The pilots trained at Luke formed the backbone of USAF's fighter force for Operations NOBLE EAGLE, ENDURING FREEDOM, and IRAQI FREEDOM.

**COMPATIBLE LAND USE**

Luke Air Force Base works directly with the local community and the State of Arizona to

address the issue of compatible land use and to advise local municipalities of impact from

development on our mission. Development around Luke Air Force Base is a reality. Luke is

vitally interested in compatible development that provides a high quality of life both for the Airmen who work and live here and for the community. Compatible development ensures the

long-term safety and welfare of citizens living around the base. Luke's position regarding

compatible land use is, and always has been, to closely coordinate with the appropriate zoning

authorities to ensure compatible land-use decisions. Uncoordinated development could have a negative impact on the local community and our flight operations.

The Luke noise contour map (adopted by the State of Arizona) can be located (hyperlink). It is important to note that aircraft noise contours are not a "line in the sand." Communities well

outside the contours can also be affected by jet noise. Additionally, safety risks become greater as encroachment from development results in tighter airspace restrictions. Although Air Force

leaders cannot engage in local government and community decision-making, we strive to

identify development proposals that may be incompatible with our military training mission. Base leaders are committed to providing information about our operations to government leaders, community planners, developers, and concerned citizens so they can make informed decisions about land use. This interaction is vital as impacts to military training operations are not always readily apparent to those who want to make use of property near the base for real-estate development.

The Arizona legislature has recognized the importance of Luke's mission to the nation's national

security by passing several state laws to formalize the communication cycle between Luke and

municipalities, and to establish some compatible-use definitions and protections in the high risk

areas on both ends of Luke's parallel runways.

Municipalities and developers routinely contact Luke officials early in the development planning

stage, working to transfer development densities away from aircraft high-noise areas. To assist

in its advisory role, Luke planning experts crafted the graduated density concept (known as the

"GDC") to encourage development that gradually increases residential density outside of

legislated "high noise" and "accident potential zone" areas. This concept has been adopted for

both Luke's main base and the base's Auxiliary Field #1 in Surprise, and is listed in municipal

general plans.

Statutes relating to military airports have been expanded and carefully crafted to provide for

open, effective communication between Luke, developers and communities so that responsible,

safe planning around the base can occur. Luke has accommodated development in the West

Valley and will continue to foster partnerships with the community and all levels of government.

Together, the base, local communities, the State of Arizona, and the state's Congressional

delegation have instituted innovative measures to allow Luke to conduct its F-35 and F-16 training mission.

**FLIGHT OPERATIONS**

The Luke AFB mission can be seen as supported by three "legs": the main base, airspace, and

auxiliary fields - each of which is essential to mission accomplishment, and each of which is

threatened by urban encroachment. The fighter jet training mission at Luke AFB is dependent not only on the base itself, but also its airspace, to include gunnery ranges, low level Military

Training Routes (MTR), outlying auxiliary airfields and Military Operating Areas (MOAs). Luke

AFB Auxiliary Airfield #1 known as "Aux-l," 15 miles northwest of Luke, supports 13,000 practice instrument operations annually. Gila Bend Air Force Auxiliary Field (AFAF), 50 miles to the south and adjacent to the Barry M. Goldwater Range (BMGR), provides a facility for practicing visual approaches. As an emergency recovery airfield, Gila Bend AFAF averages 75

emergency aircraft recoveries annually. Luke conducts over 16,000 operations or over flights in its local airspace annually. Luke Air Force Base flight operations are typically from 7 a.m. to 11:30 p.m. Monday through Friday, but Luke may fly outside of this window, to include weekends, due to mission requirements. Luke airspace is one of the busiest for air traffic in the world.

Operational flexibility is necessary for Luke’s flying training mission. F-35 and F-16 pilots need access to operating areas, low-level military training routes and the opportunity for flying practice instrument approaches.

**MILITARY OPERATING AREAS**

Luke AFB has several military operating areas (MOAs) where F-35s and F-16s conduct air-to-air and air-to-ground training sorties. These include the Sells, Bagdad, Gladden, Outlaw, Auxiliary Field #1 and the Barry M. Goldwater Range. To use these MOAs, Luke jets fly defined departures and recoveries. Pilots practice visual and instrument recoveries into Luke AFB, Gila Bend Air Force Airfield, and Aux-1, a closed airfield located 125 miles northwest of Luke AFB. Luke AFB and Gila Bend Air Force Airfield have traffic as high as 10,000’ Above Ground Level (AGL) practicing emergency procedures. The radar pattern has a very high potential for near mid-air collisions due to the heavy workload of fighter aircraft under radar approach control (RAPCON) and general aviation aircraft that fly under Visual Flight Rules (VFR).

**MILITARY TRAINING ROUTE (MTR) ACTIVITIES**

Fighter pilots need to know how to fly low and fast. The idea is to use low altitude and terrain in order to avoid visual and radar detection, as well as to render enemy air defenses less effective. The actual tactical situation will determine whether the fighters elect to fly low in combat, but it’s necessary to have the skill. This skill involved prioritization between not hitting the ground, keeping his flight leader in sight, flying the briefed formation, keeping radar and visual lookout for threats, navigating using onboard systems and visual references, and monitoring aircraft systems and fuel. In the beginning, about all the student can do is to keep from hitting the ground and perhaps keeping his flight lead in sight. By the end of his training they are ready to perform all the required tasks in combat.