Air Installations Compatible Use Zones Program

The Department of Defense's (DoD's) Air Installations Compatible Use Zones (AICUZ) Program balances the needs of aircraft operations with community concerns by promoting compatible use of lands in the vicinity of military airfields. This is done to protect public health, safety, and welfare without degrading flight safety and mission requirements.[1] AICUZ studies analyze the effects of aircraft noise, aircraft accident potential, and land development on present and future neighbors of United States Air Force bases.

This brochure summarizes the Beale Air Force Base (AFB), California, 2020 AICUZ Study. The 2020 AICUZ Study provides an update to the previous AICUZ Study for Beale AFB, which was published in 2005. The update incorporates changes in aircraft operations, including increased KC-135 tanker operations, changes in flight tracks, and changes in noise modeling methodology. The study also provides compatible land use recommendations for land areas surrounding Beale AFB.

Land close to Beale AFB is exposed to increased noise levels. Without compatible land use controls, development in these areas could result in incompatible uses that create conflicts between military flight operations and landowners.

Beale Air Force Base History and Mission

The primary mission of Beale AFB is to train, deploy, and employ our Airmen and assets to deliver combat power and globally integrated intelligence, surveillance, and reconnaissance in support of national objectives.

Beale AFB is located on the site of the former Camp Beale, which was constructed by the Army in 1942 in response to the Japanese attack on Pearl Harbor on December 7, 1941. The installation was transferred to the Air Force in 1948 and renamed Beale Air Force Base in 1951. Beale AFB has hosted many missions and types of aircraft over the years (see "Based and Transient Aircraft Utilizing Beale Air Force Base," inset).

In 2001, Beale AFB became home to a cutting-edge reconnaissance platform with activation of the 12th Reconnaissance Squadron, the parent organization for the RQ-4 Global Hawk. Today, in addition to the RQ-4 Global Hawk, Beale AFB is home to the U-2 Dragon Lady and T-38 Talon. Nearly 7,000 military and civilian personnel are employed at Beale AFB, which continues its unique mission to deliver combat power and globally integrated intelligence, surveillance, and reconnaissance.

Between 2006 and 2008, local communities participated in the Beale Joint Land Use Study, a strategy guide intended to protect the viability of current and future missions at Beale AFB while accommodating growth, sustaining the economic health of the region, and protecting public health and safety.

Economic Impact

The DoD provides direct, indirect, and induced economic benefits to local communities through jobs and wages. Benefits include employment opportunities, increases in local business revenue, and revenue from the sale and taxing of property. DoD operations at Beale AFB contributed a total economic impact of $627 million in fiscal year 2017, including all procurement and military and civilian payroll. The economic impact of the installation extends throughout the state of California but is concentrated in the five counties making up the surrounding region: Butte, Nevada, Placer, Sutter, and Yuba counties.

Noise Zones and Noise Metric

Under the AICUZ Program, the DoD provides noise zones to define noise exposure. In California, noise exposure is measured using a metric called the Community Noise Equivalent Level (CNEL), which describes the accumulation of noise energy from all aircraft noise events in a 24-hour day. The CNEL takes into account the time of day that a noise event takes place:

- The CNEL adds a 10-dB adjustment to each noise event between 10:00 p.m. and 7:00 a.m. to account for the intrusiveness of nighttime aircraft operations.
- The CNEL also adds an adjustment of 5 dB to each evening operation between 7:00 p.m. and 10:00 p.m.

The map on the back of this brochure shows Beale AFB's noise contours. Noise contours are planning tools that local agencies can consider during land use decisions and can be shared with potential buyers during real estate transactions.

Noise contours are based on typical operations and flight tracks during normal operations. It should be noted that flight tracks are not roadways in the sky.[2] Weather conditions, wind, pilot technique, and other air traffic can cause some lateral deviation within the traffic pattern around a runway.

Clear Zones and Accident Potential Zones

The DoD provides Clear Zones and Accident Potential Zones (APZs) as planning tools for local agencies. Clear Zones and APZs define the area where an aircraft accident is likely to occur, if an accident occurs.

- Clear Zone: an area measuring 3,000 feet long by 3,000 feet wide centered on the end of the runway.
- APZ I: a 3,000-foot-wide by 5,000-foot-long area beyond the Clear Zone and along the extended runway centerline.
- APZ II: a 3,000-foot-wide by 7,000-foot-long area beyond APZ I and along the extended runway centerline.

The map on the reverse of this brochure also shows Beale AFB's Clear Zones and APZs.

[1] *The Air Force's guidance on the AICUZ program may be found in Air Force Instruction 32-1015 (2019).*

[2] *Maps of Beale AFB flight tracks are available in the AICUZ Study.*

[3] *Imaginary surfaces are described in Unified Facilities Code 3-260-01 and 14 Code of Federal Regulations Part 77.17.*

Hazards to Aircraft Flight Zone

Certain land uses and activities can pose potential hazards to flight. These land uses and activities may include:

- Uses that would attract birds, especially waterfowl;
- Towers, structures, and vegetation that penetrate navigable airspace or are to be constructed near the airfield;
- Lighting (direct or reflected) that would impair pilot vision;
- Uses that would generate smoke, steam, or dust; and
- Electromagnetic interference with aircraft communication, navigation, or other electrical systems.

The Air Force has identified a Hazards to Aircraft Flight Zone (HAFZ) within the imaginary surfaces of the runway to address these concerns.[3] Unlike noise zones, Clear Zones, and APZs, the HAFZ does not have recommended compatible land uses (see the "Compatible Development" section). Instead the HAFZ is a consultation zone within which the Air Force requests that project applicants and local planning bodies consult with the Air Force to ensure projects are compatible with installation operations.

Compatible Development

The AICUZ Program includes guidelines for land use within noise zones, Clear Zones, and APZs (see table below). In general, these guidelines recommend that noise-sensitive land uses be placed outside of high noise zones and that people-intensive uses not be placed within APZs. Certain land uses are considered incompatible, while other land uses may be considered compatible, compatible under certain conditions, or compatible with restrictions.

At Beale AFB, most existing land uses and zoning districts within the noise zones, Clear Zones, and APZs are compatible with aircraft operations at the installation. The map on the back of this brochure shows Beale AFB's noise zones, Clear Zones, and APZs, as well as existing land use around the installation.

Land development should be compatible with noise zones, Clear Zones, and APZs around a military airfield. Although the military can serve in an advisory capacity, local governments control development beyond the boundaries of Beale AFB.

Land Use Classification and Compatibility Guidelines

Generalized Land Use	NOISE ZONE (dB CNEL) <65	65-69	70-74	75-79	80-84	85+	CLEAR ZONE	APZ I	APZ II
Residential	Yes	No[1]	No[1]	No	No	No	No	No	No[1]
Commercial	Yes	Yes	Yes[2]	Yes[2]	No	No	No	Yes[2]	Yes[2]
Industrial	Yes	Yes	Yes	Yes	Yes[2]	No	No	Yes[2]	Yes[2]
Public/Quasi-Public	Yes	Yes[2]	Yes[2]	Yes[2]	No	No	No	No	Yes[2]
Recreation	Yes	Yes[2]	Yes[2]	No	No	No	No	Yes[2]	Yes[2]
Open/Agriculture/Low Density	Yes	Yes[2]	Yes[2]	Yes[2]	Yes[2]	Yes[2]	No	Yes[2]	Yes[2]
Undesignated	Yes	No	No	No	No	No	No	No	No

Key: Compatible; Incompatible; [1] Incompatible with exceptions; [2] Compatible with restrictions

Source: Adapted from AFI 32-1015
Refer to AICUZ Study Appendix A for details

Based and Transient Aircraft Utilizing Beale Air Force Base

Aircraft operating out of Beale AFB are primarily fixed wing jets.

BASED AIRCRAFT

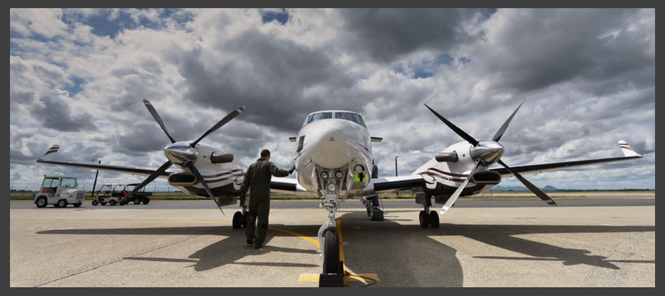
The U-2S Dragon Lady is a single-seat, single-engine, high-altitude reconnaissance and surveillance aircraft that provides signals, imagery, and electronic intelligence. Long and narrow wings give the U-2 glider-like characteristics and allow it to quickly lift heavy sensor payloads to altitudes over 70,000 feet, keeping them there for extended periods of time.

The RQ-4 Global Hawk is a high-altitude, long-endurance, unmanned aircraft system with sensors that provide intelligence, surveillance, and reconnaissance capability.

The T-38 Talon is a twin-engine, high-altitude, supersonic jet. At Beale AFB, the T-38s are used to maintain pilot proficiency in high-speed maneuvers.

The KC-135 Stratotanker is an aerial refueling and airlift aircraft. KC-135s provide aerial refueling support to Air Force, Navy, Marine Corps, and allied nation aircraft and transport litter and ambulatory patients during aeromedical evacuations.

TRANSIENT AIRCRAFT



Aircraft that are not permanently assigned to an installation, but occasionally conduct operations at the installation, are referred to as "transient" aircraft. Transient aircraft that utilize Beale AFB include the C-12 Huron, C-5M Super Galaxy, and C-17 Globemaster III. Variants of the C-12, a turboprop aircraft, are used by the Air Force, Army, Navy, and Marine Corps for different purposes, including intelligence, surveillance, and reconnaissance; passenger transport; and aeromedical evacuations. The C-5M and C-17 are used to transport cargo and personnel. The C-5M is the largest aircraft in the Air Force inventory.

Air Installations Compatible Use Zones (AICUZ) Brochure for

Beale Air Force Base (AFB)

California

U.S. AIR FORCE

2020

For More Information:

Concerned citizens are encouraged to contact the Beale AFB 9th Reconnaissance Wing Public Affairs Office with any noise complaints at:

530-634-8887

Beale AFB also posts information on the installation website, including notices of upcoming aircraft operations that are able to be shared publicly:

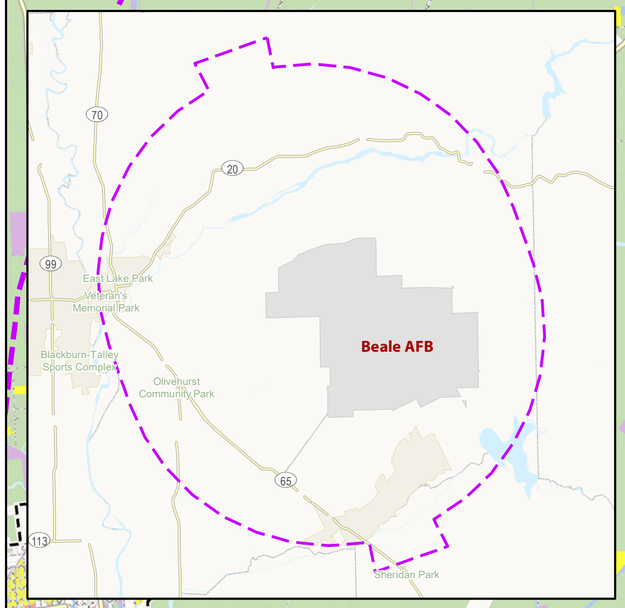
Website: **www.beale.af.mil**

Facebook: **www.facebook.com/BealeAirForceBase**

Twitter: **www.twitter.com/9thrw**

Beale Air Force Base
Air Installation Compatible Use Zones

Existing Land Use, 2020 Beale AFB Noise Contours, and AICUZ Clear Zones and Accident Potential Zones



Yuba River
Hammonton Smartville Rd
Beale Rd
Yuba Co.
Beale AFB
Smartville Rd
Spenceville Rd
Gavin Mandry Dr
Camp Far West Rd
Wheatland
Placer Co.
Yuba City
Sutter Co.
Arboga Rd
Erle Rd
20
70
85
80
75
65
60

Legend:

- County Boundary
- City Boundary
- State/U.S. Highway
- Other Major Road
- Runway
- Installation
- HAFZ Consultation Zone
- 2020 Beale AFB Noise Contour (dB)

2020 AICUZ Clear Zones and APZs

- Clear Zone
- Accident Potential Zone I
- Accident Potential Zone II

Existing Land Use

- Commercial
- Industrial
- Open/Agriculture/Low Density
- Public/Quasi-Public
- Recreation
- Residential
- Undesignated
- No Data Collected

N

0 1 2 Miles

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