AICUZ Program

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

This brochure summarizes the Joint Base McGuire-Dix-Lakehurst (JB MDL) 2022 AICUZ Study. The 2022 AICUZ Study provides an update to the 2013 JB MDL Study. The update documents changes in aircraft at JB MDL and provides compatible land use guidelines for land areas surrounding JB MDL. Some land close to JB MDL will experience high noise levels. Without compatible land use controls, development in the surrounding areas could result in incompatible uses that create conflicts between military operation and landowners.

JB MDL Mission & History

With Air Force, Army, and Navy missions, JB MDL is the nation's only tri-service joint base and the largest DoD installation in the New York Metropolitan-Delaware Valley area. Located 18 miles southeast of Trenton, N.J., the 42,000-continguous acres are home to more than 80 mission partners and 40 mission commanders providing a wide range of combat capability. The 87th Air Base Wing is the host unit at JB MDL and provides installation management to the joint base.

JB MDL was created when the former McGuire Air Force Base, Fort Dix, and Naval Air Engineering Station Lakehurst merged in October of 2009. The merger occurred by recommendation of the 2005 Base Closure and Realignment Commission (BRAC), which also directed the support functions for Fort Dix and Naval Air Engineering Station Lakehurst to relocate to McGuire Air Force Base.

As one of 12 joint bases established through the 2005 BRAC process, JB MDL is host to a multitude of Air Force, Army, Marine Corps, and Navy assets. With every service represented on the installation, JB MDL brings integral resources to today's fight as America's premiere warfighting base.

Economic Impact

The military provides direct, indirect, and induced economic benefits to local communities through jobs and wages. Benefits include employment opportunities and increases in local business revenue, property sales, and tax revenue. JB MDL is the largest DOD employer in the State of New Jersey, providing well-paying jobs and economic stability that creates demand for goods and services, and supports local businesses and the local economy. According to an economic impact analysis for Fiscal Year 2018, it is estimated that the annual economic impact of JB MDL was \$4.8 billion. That makes the base's economic footprint enormously important for both the region and state.

Noise Zones and Noise Metric

Under the AICUZ Program, the DoD provides noise zones to define aircraft noise exposure, using the Day-Night Average Sound Level (DNL). The DNL metric is based on the number of average daily aircraft operations over a 24-hour period, and A-weighted DNL is used for aircraft noise. Noise exposure contours for aircraft are based on typical operations and flight tracks. Note that flight tracks are not roadways in the sky. Weather conditions, pilot technique, and other air traffic can cause some lateral deviation within the traffic pattern around a runway.

For range-generated noise, two noise metrics are employed by the DoD in this AICUZ Study, including Peak Sound Pressure Level (dB PK), which is the highest instantaneous, sound over a given period of time, as well as CDNL, is also a cumulative noise metric; however, it uses a C-weighted scale, which captures lower-frequency sound levels.

Clear Zones and Accident Potential Zones

The DoD provides Clear Zones and Accident Potential Zones (APZs) for Class A and Class B Runways as planning tools for local agencies. Clear Zones and APZs define the areas where an aircraft accident is likely to occur, if one were to occur. For planning purposes within this AICUZ, Class B Runway Clear Zones and APZs are used at JB MDL and are described as:

- ▶ Clear Zone: a 3,000-foot square area 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.

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 runways to address these concerns. Unlike noise zones, Clear Zones, and APZs, the HAFZ does not have recommended land use compatibility (see the Compatible Development section). Instead, the HAFZ is a consultation zone within which the DoD requests that project applicants and local planning bodies consult with the DoD to ensure the project is compatible with installation operations.

The maps on the back of this brochure show noise zones, CZs, APZs, and surface danger zones for JBMDL.

Compatible Development

The AICUZ Program includes guidelines for land use within noise zones, Clear Zones, and APZs—and in the case of JB MDL, for both airfield and range activities (see Tables 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 with restrictions, or incompatible with exceptions.

JB MDL is a large installation with two airfields and a range in between and multiple population centers around the perimeter of the installation, such as Wrightstown, Lakehurst, and Browns Mills. The noise zones associated with the two airfields are mostly contained on-base; however, portions do extent off the ends of the runways into surrounding municipalities. Similarly, the noise zones associated with the range also extend off-base to the north and south. The CZs, and APZs also extend into surrounding areas of Burlington and Ocean counties. The map on the opposite side of this brochure shows JB MDL's noise zones related to both airfields and range activities, as well as the Clear Zones, and APZs associated with the runways.

Land development should be compatible with noise zones, Clear Zones, and APZs around a military airfield and range. Although the military can serve in an advisory capacity, local and tribal governments, as well as private citizens control development beyond the boundaries of JB MDL.

Generalized Land Use Compatibility for Large-Caliber Weapon and Artillery/Explosive Noise¹

Generalized Land Use Category		ompatibility with Noise Zon light Average Sound Level Noise Zone II 62-70 (CDNL)			
Residential	Yes	No³	No		
Commercial	Yes	Yes	No		
Industrial	Yes	Yes ⁴	Yes ⁴		
Public/Quasi-Public	Yes	No³	No		
Open/Agriculture/Low Density	Yes	Yes ⁴	Yes ⁴		
Transportation/Communication/Utilities	Yes	Yes	Yes ⁴		
Undeveloped	Yes	Yes	Yes		
Source: Adapted from AFH 32-7084	Key: Compati	ble Compatible with Res	trictions Incompatible		

- Notes:

 1 This generalized land use table provides an overview of recommended land uses. To determine specific land use compatibility, see Appendix A.
- 2 LUPZ (Land Use Planning Zone) is an area in which its implemented controls function to create a buffer for Noise Zone II to prevent possibility of future noise conflicts.
 3 Residential land uses within the 62-70 CDNL noise contours are considered incompatible. However, if residential uses are considered essential, noise-attenuation measure should be incorporated into the building structures. Similarly, Public/Quasi-public land uses, which could include schools/educational facilities, are considered incompatible and similar noise-attenuation measures should be incorporated.
- Compatible with restrictions.

Generalized Land Use Categories and Noise/Safety Compatibility

Generalized Land Use Category	<65	N 65-70	loise Zon 70-75	e (dB DN 75-80	L) 80-85	85+	cz	APZ I	APZ II
Residential	Yes	No ²	No ²	No	No	No	No	No	No ³
Commercial	Yes	Yes	Yes⁴	Yes⁴	No	No	No	Yes⁴	Yes ⁴
Industrial	Yes	Yes	Yes	Yes	Yes⁴	No	No	Yes⁴	Yes ⁴
Public/Quasi-Public	Yes	Yes ⁴	Yes ⁴	Yes ⁴	No	No	No	No	Yes⁴
Open/Agriculture/Low Density	Yes	Yes ⁴	Yes ⁴	Yes ⁴	Yes⁴	Yes⁴	No	Yes⁴	Yes⁴
Transportation/Communication/Utilities	Yes	Yes	Yes	Yes	Yes	No	No	Yes ⁴	Yes
Undeveloped	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Source: Adapted from AFH 32-7084		Kev.	Compati	blo	Compatib	la with Ras	trictions	Inco	mnatihlo

- Notes:

 1 This generalized table demonstrates the land compatibility guidelines. Refer to Appendix A for use in determining land use compatibility.
- 2 Residential land uses within the greater than 65 dB DNL noise contours are considered incompatible. However, if residential uses are considered essential contours are considered incompatible.
- 3 Residential land uses in APZ II are considered incompatible, with the exception of two dwellings per acre
- 4 Compatible with restriction

Generalized Land Use Compatibility for Small-Arms Noise¹

Generalized Land Use Category	Land Use Compatibility Noise Zone I <87 dB PK15 (MET)	with Noise Zone dB Peak Noise Zone II 87-104 dB PK15 (MET)	Pressure (dB Pk15 [MET]) Noise Zone III >104 dB PK15 (MET)
Residential	Yes	No ²	No
Commercial	Yes	Yes ³	Yes³
Industrial	Yes	Yes ³	Yes³
Public/Quasi-Public	Yes	Yes³	Yes³
Open/Agriculture/Low Density	Yes	Yes ³	Yes³
Transportation/Communication/Utilities	Yes	Yes³	Yes³
Undeveloped	Yes	Yes	Yes
Source: Adapted from AFH 32-7084	Key: Compatil	ble Compatible with Res	strictions Incompatible

- Notes:

 1 This generalized land use table provides an overview of recommended land uses. To determine specific land use compatibility, see Appendix A.
- This generalized land use table provides an overview of recommended land uses. To determine specific land use compatibility, see Appendix A.
 Residential land uses within the 87-104 dB PK15 noise contours are considered incompatible. However, if residential uses are considered essential, noise-attenuation measures should be incorporated into the building structures.
- Compatible with restriction:

Based and Transient Aircraft Utilizing JB MDL

Aircraft permanently based at JB MDL are the most common aircraft conducting flight operations at the installation. Permanently assigned to JB MDL include the KC-46A (replacing the KC-10) and C-17, among other fixed-wing aircraft, in addition to several helicopters, including CH-53K and AH-1Z/UH-1Y. Transient aircraft also conduct flight operations at the JB MDL

Based Aircraft Include the Following















Transient Aircraft

In addition to those aircraft assigned to JB MDL, the base hosts a variety of transient aircraft. These include tactical, cargo and passenger transport, and refueling aircraft. Some of these include the following:







\JointBaseMcGuireDixLakehurst lim.d[.lbmd[.www\\:sqtth used to post information and/or alerts include: https://www.jbmdl.jb.mil/. Other social media accounts installation's website in the lower right at The "JB MDL Noise Level Calendar" can be found on the MDL—Lakehurst are not included). altield operations at JB MDL—McGuire and JB includes only noise associated with the range, and the operations that may generate noise (note that this website, including alerts about upcoming range JB MDL also posts certain information on its installation lim.ta.su@aq.wda.\8 or via email at t012-t91 (609) Citizens can reach with any noise complaints. are encouraged to contact the following For More Information: Concerned citizens For More Information 2022 87th Air Base Wing Civil Engineering Squadron Delaware Ave, Building 5320, Joint Base McGuire-Dix-Lakehurst, New Jersey

