

MARINE CORPS AIR STATION NEW RIVER

Military Aircraft Noise Fact Sheet

Typical Sources of Aircraft Noise at MCAS New River and MCB Camp Lejeune

Most people have seen signs such as "PARDON OUR NOISE; IT'S THE SOUND OF FREEDOM." Aircraft noise is a byproduct of aviation training activities required to maintain a highly skilled expeditionary force in readiness. Noise from MCAS New River comes from two main sources heavy lift and light/attack helicopters from Marine Aircraft Group 29 and MV-22 Osprey aircraft from Marine Aircraft Group 26. Takeoffs and landings from these aircraft create intermittent noise.

Maintenance activities and pre-flight checks create continuous noise. These aircraft account for over 92K annual aircraft operations at MCAS New River that includes arrivals, departures, overhead arrivals, and pattern operations. The sheer numbers and training requirements occurring at the air station require the use of "away space" that includes the Camp Lejeune/Cherry Point Range Training Areas, Outlying Airfields (OLF), Tactical Landing Zones (TLZ), Military Training Routes (MTR), Terrain Flying Routes (TERF), and local General Aviation Airfields. Residents near these areas may experience noise from military aircraft.



What is Noise?

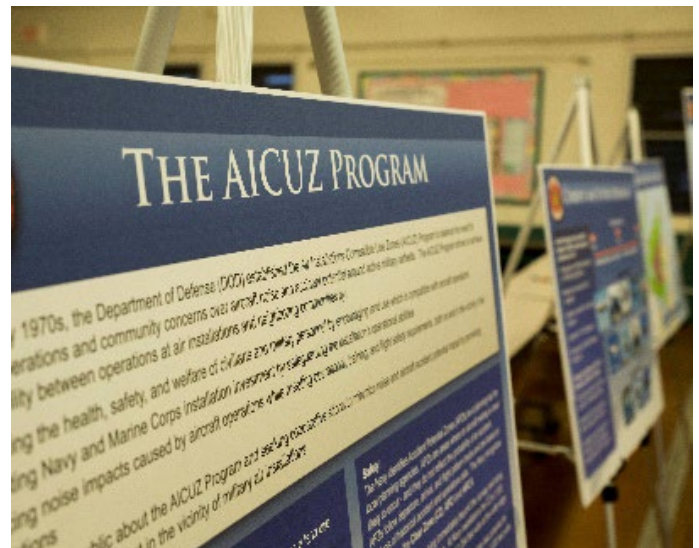
Noise is any unwanted sound. When sound is invasive or unwanted, it is often considered noise. In general, individual responses to noise vary, and are influenced by several factors including:

- The activity an individual was engaged in at the time of the noise event
- The individual's general sensitivity to noise
- The time of day or night
- The length of time an individual is exposed to a noise
- The predictability of noise
- Weather conditions

Air Installations Compatible Use Zone (AICUZ)

In the early 1970's, the Department of Defense (DOD) initiated the Air Installations Compatible Use Zone (AICUZ) program to protect the health, safety, and welfare of those living and working in the vicinity of a military installation while sustaining the operational mission. Under the AICUZ program, the DOD established guidelines to define high noise and accident potential zones (APZs) surrounding military airfields and recommended land uses that are compatible within these zones.

This is explained further in the AICUZ study available at:
www.newriver.marines.mil



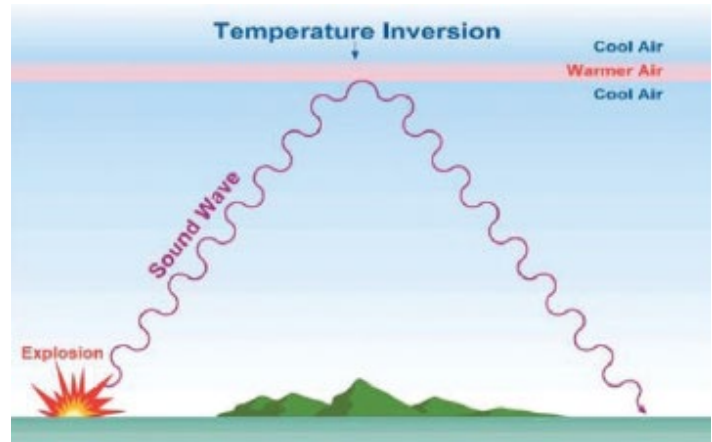
Noise contours and land use recommendations are based on average annoyance responses of a population, but some people have greater noise sensitivity than others. Noise concerns typically are made only by a small percentage of the people who are actually bothered by noise and normally occur outside of the AICUZ noise footprint. However, with the ever-increasing population growth in eastern North Carolina we see the proportional increase in noise concerns. In recognition of the importance for the community to voice concerns about aircraft noise, MCAS New River has developed a noise concern process that allows for the collection, investigation, reporting, and responding (if required) to a noise event.

Transient rotor and tilt-rotor aircraft normally fly by Visual Flight Rules (VFR). For safety, these aircraft will remain below 3000 feet to allow safe separation from faster moving fixed-wing aircraft.

The Influence of Weather on Noise

The way people perceive and react to different types of noise may vary based on the frequency of the noise (a technical characteristic of sound). Aircraft noise often causes higher frequency noise compared to the low frequency rattling and shaking associated with range training (e.g., tank firing, artillery, demolition training activities).

Weather conditions can greatly affect how noise travels through the air. Factors such as wind and temperature influence how far noise travels and how loudly it is perceived. Winds that change the direction of sound waves and variations in air temperature, called inversions, may bend or trap sound waves traveling through the air. The inversion layer acts as a boundary for the sound, trapping it close to the ground and enabling it to travel much greater distances than normal. This can create areas of high intensity sound far from the sound's source. As a result, on most days it may be possible to detonate 1,000 pounds of explosives without disturbing the community, while on another day with a temperature inversion, the detonation of 10 pounds at the same location may disrupt the community. The figure illustrates how inversions influence the sound created by a typical explosion: The sound waves from the explosion initially travel upward, but the inversion reflects the sound back down toward the ground, generating high noise levels many miles away. Noise levels at that distance would otherwise be much lower.



Purpose of the Noise Concern System

All levels of the chain of command at MCAS New River are cognizant of noise sensitivity and discuss community noise concerns during various meetings and forums. We understand that noise concerns are related to the intensity and frequency of the events, as well as individual sensitivity, and can arise outside the areas depicted within published noise contours. The purpose of the New River noise concern system is to assist the installation in maintaining compliance with Federal Aviation Administration (FAA) flight regulations and air station standard operating procedures in order to minimize the effects of noise on neighboring communities.



To this end, MCAS New River investigates noise concerns to determine if the operation that likely caused the noise event was compliant with current regulations and procedures. These investigations ensure that

both Marine Corps and public interests are protected and support ongoing communication between the base and communities.

The New River noise concern system is not an avenue for individuals to comment on their general dislike of aircraft noise, the Marine Corps, or the military. While those comments are received and recorded through the noise concern system, they are not investigated unless the concern suggests the flight operation was not in compliance with the MCAS NR/FAA flight regulations. Concerns will not change the flight patterns of current operations or the hours New River operates, relocates aircraft somewhere else, or close the installation. Noise will be ever present when aircraft are flying and conducting flight operations at OLF Camp Davis and OLF Oak Grove in support of DOD requirements.

MCAS New River Noise Concern System Process

Persons with concerns or comments may call a recorded noise concern hotline at **910-449-0529** or email

nrnoisecomplaints@usmc.mil. Noise concerns that come in by phone are recorded. Concerns that come in by email are stored in a digital folder. The Operations Duty Officer listens to all recorded phone messages and opens every email from the previous day. The information is transcribed to include the caller/emailer information, date, time, location, and narrative into a database. A daily summary is then provided for review. The reviewer compares concerns to recorded Air Traffic Control air operations to determine what event may



have occurred during the time and place of the concern and if any course rules were violated. If warranted, a recommendation is provided to address the issue. Additionally, the squadrons are briefed weekly on areas of increased or repetitive noise concerns. An avoidance area may be designated by the squadron command at this time but only in the context of providing brief respite from the noise impacts. This avoidance, while mitigating noise impacts over one area, will necessitate an increase in flight operations over other areas. If a concern is received in these areas, it is handled in the same manner. The intent is to continue conducting military aircraft operations while being mindful of the community noise impacts. At no time is an individual home designated an avoidance area without realizing that the same consideration would need to be extended to similar noise concerns. The cumulative effect would ultimately lead to the degradation in our ability to conduct training flight operations.

To report a noise event that may have resulted from an aircraft not following FAA flight regulations or air station standard operating procedures, call the MCAS New River Noise Concern Hotline at 910-449-0529 or email nrnoisecomplaints@usmc.mil.

Response to Noise Concerns

If after investigation of a concern, the review determines that a response is necessary or requested, a base official makes a follow-up call or email to the individual who initiated the concern and provides an explanation of the noise event. It is important for the local community to understand that the purpose of the noise concern system is to focus on FAA flight regulations and air station standard operating procedures.

As always, the community's patience is appreciated as our personnel continue to train under the most realistic conditions necessary to go into harm's way.