

Purpose of the Range Compatible Use Zones

This study addresses the Range Air Installations Compatible Use Zones (RAICUZ) for the Noxubee County Target Range SEARAY. Aircraft from Naval Air Station (NAS) Meridian, Mississippi, are the primary users of this range. The purpose of the Target Range SEARAY RAICUZ Study is to protect public health, safety, and welfare, and to prevent encroachment from degrading the operational value and capability of the range. It contains range safety and noise analysis as well as land use recommendations. The primary objectives of the study are to preclude public exposure to hazards associated with inert weapons training within the range; prevent incompatible development or uses near the range; protect the Navy's investment by safeguarding the operational capacity of the range; and inform the public about the RAICUZ program and seek cooperative efforts to maximize safety and minimize effects within the vicinity of the installation.



Range and Airspace Overview

Target Range SEARAY is approximately 2,900 acres of fee and easement ownership interests. Target Range SEARAY's main mission is to provide a practice inert bombing range for pilots in training at NAS Meridian. Special use airspace (SUA) has a defined vertical and lateral limit that has been established by the Federal Aviation Administration (FAA) within which the flight of non-military aircraft, while not wholly prohibited, is subject to restrictions. SUA is established to segregate air activities, which may be hazardous to non-participating aircraft. Restricted areas are a type of SUA, and restricted area R-4404A/B/C overlays and surrounds Target Range SEARAY.

Noise

This study addresses the noise impacts associated with aircraft operations. Aircraft noise was analyzed based on aircraft activities within R-4404A/B/C. The noise is described in terms of Onset-Rate adjusted A-weighted Day-Night Average Sound Levels (Ldnmr). The range supported 8,600 aircraft sorties in Calendar Year 2001 (CY01) and is projected to support 12,800 aircraft sorties during Calendar Year 2005 (CY05). The average Ldnmr of 65-75 dB resulting from aircraft operating within the restricted airspace areas were computed to encompass some 1,900 acres off-range in CY01 and are projected to encompass some 3,400 acres in CY05.

The area most impacted by noise is southwest of the target on approach and turning northwest on departure from the target. While much of this area is uninhabited, it does not mean off-range residents do not hear the noise associated with range operations; and some of these residents may find the noise levels objectionable. However, with the exception of not recommending housing construction in areas exposed to noise levels of 65-75 Ldnmr, few zoning restrictions would be recommended for off-range areas at this time due to the noise levels reflected in this study.

Safety

Safety issues associated with range operations involve both aircraft over-flight and ordnance delivery at the range. Live ordnance is not allowed at the range and currently only MK 76 and BDU 33 practice bombs are used. These inert practice bombs have only a small spotting charge that releases a cloud of smoke on impact.

Safety associated with air-to-ground delivery of ordnance is ensured by first planning and developing Range Safety Zones (RSZs) for all targets, which translate aviation and ordnance delivery safety concerns into degrees of safety that can be reasonably attained. For Target Range SEARAY, there is a single bull's-eye target used for practice bombing drops.



There are three RSZs designated for air-to-ground ranges:

- **Range Safety Zone A:** This zone defines the minimum range surface area needed to contain ordnance employed in air-to-ground training including initial impact and ricochet. It is the area of maximum safety hazard. RSZ A corresponds with the range composite weapons safety footprint, which is calculated using the SAFE-RANGE methodology. This composite hazard area is the summation footprint of all appropriate weapons safety footprints for the range. The range composite weapons safety footprint, RSZ A, encompasses approximately 1,634 acres. Of that, 572 acres are located within the range fee ownership boundary and 975 acres are located within Navy controlled perpetual and assignable easement properties. A total of 87 acres are located outside Navy owned or controlled land.
- **Range Safety Zone B:** This zone is defined as the area of armed overflight, which is considered an intermediate level of safety hazard concern. The length of the zone begins at the point the pilot releases the master arming switch in preparation for weapons delivery to the target. RSZ B for Target Range SEARAY is 1,000 feet wide, begins 2.5 miles from the target, and ends at the edge of RSZ A. RSZ B totals 197 acres, of which 53 acres are located over range property and 162 acres are located outside range property.
- **Range Safety Zone C:** RSZ C defines a minimum level of safety hazard concern and recognizes airspace that is restricted for safety of flight. RSZ C is required to provide the range user tactical maneuvering room. This zone is a three-dimensional concept, which sets restrictions both laterally and vertically. RSZ C is a 5 nautical mile (NM) radius centered on the range's bull's-eye and covering 66,566 acres horizontally. Vertically, RSZ extends from the ground to 11,500 feet mean sea level (MSL). Though R-4404C is located directly above R-4404B extending from 11,500 feet MSL to 14,500 feet MSL, R-4404C is not used for range operations, and therefore, not included in the vertical portion of RSZ C.

Range Compatible Use Zones

The core of the RAICUZ program is a land use plan that recommends land uses for areas exposed to different levels of potential weapons impact and noise. Target Range SEARAY RAICUZ noise and safety areas were identified as part of this study, and are used as a basis for identifying different types of compatible use.

Impact Analysis

Target Range SEARAY is within Noxubee County, Mississippi. The majority of land surrounding the range is undeveloped. Any change in off-range land use would be tied to population and development trends in this area. Currently, no development plans envision any development actions. The relatively small change in population, housing units, commercial growth, and employment forecasted for Noxubee County in the next decade are indicative that there will be little if any demand for changes in off-range land use adjacent to Target Range SEARAY.

Recommendations and Implementation

The following are recommendations that can be used in implementing the RAICUZ program at NAS Meridian and Target Range SEARAY.

1. Designate a RAICUZ officer to interface with local government officials and local residents. The RAICUZ officer could also be instrumental in assisting in a community outreach program.
2. Consider acquisition of real estate interests in the portion of RSZ A that falls outside the current Range ownership boundaries.
3. Monitor local planning activities and proposed development within the land areas under R-4404 and seek to update land use controls to ensure future compatible land use as appropriate.
4. Update current mapping within the Navy's SAFE-RANGE database to reflect the results of this study.