

SECTION 1.0

PURPOSE AND NEED

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SECTION 1. PURPOSE AND NEED

1.1 INTRODUCTION

This study is an update of the 2008 Dyess Air Force Base (AFB) Air Installation Compatible Use Zone (AICUZ) Study. The update presents and documents the changes to the AICUZ for the period of 2008 to 2013. It reaffirms the U.S. Air Force (USAF) policy of promoting public health, safety, and general welfare in areas surrounding Dyess AFB. The report presents changes in flight operations since the last study, and provides current noise contours and compatible use guidelines for land areas surrounding the base. It is hoped this information will assist the local communities, and serve as a tool for future planning and zoning activities. The changes in the AICUZ are attributed to:

- Fielding of the C-130J Super Hercules.
- Changes to transient aircraft operations and profiles since the 2008 study.
- Improvements to the computerized noise modeling program NOISEMAP.
- Change in U.S. Department of Defense (DoD) policy to describe an average annual day.
- Potential encroachment issues from increased potential for urban development near the installation (Section 4.4).

1.2 PURPOSE AND NEED

The purpose of the long-standing AICUZ Program is to promote compatible land development in areas subject to operational noise and accident potential. The program was initiated to protect the public's health, safety, and welfare, as well as to protect military airfields from encroachment by incompatible uses and structures.

As the cities of Abilene and Tye, and Taylor County prepare and modify their land use development plans, recommendations from this updated AICUZ study should be included in their planning processes to prevent incompatibility that may compromise Dyess AFB's ability to fulfill its mission requirements. Accident potential and aircraft noise should be major considerations in their planning processes. USAF AICUZ land use

guidelines reflect land use recommendations for Clear Zones (CZs), Accident Potential Zones (APZs) I and II, and four noise zones. These guidelines have been established on the basis of studies prepared and sponsored by several Federal agencies, including the Department of Housing and Urban Development, Environmental Protection Agency, USAF, and state and local agencies.

The guidelines recommend land uses which are compatible with airfield operations while allowing maximum beneficial use of adjacent properties. The USAF has no desire to recommend land use regulations which render property economically useless. It does, however, have an obligation to the inhabitants of the Dyess AFB area of influence and the citizens of the United States to point out ways to protect the public investment in the installation and the health, safety, and welfare of the people living in areas adjacent to the installation. The AICUZ area of influence includes the area within the noise zones, the imaginary surfaces, and the area within the CZs and APZs.

The AICUZ Program uses the latest technology to define noise levels in areas near USAF installations. An analysis of Dyess AFB's flying operations was performed, including types of aircraft, flight patterns utilized, variations in altitude, power settings, number of operations, and hours of operations. This information was used to develop the noise contours contained in this study. The DoD NOISEMAP methodology and the day-night average A-weighted sound level (DNL) metric was used to define the noise zones for Dyess AFB.

1.3 PROCESS AND PROCEDURE

Preparation and presentation of this update to Dyess AFB's AICUZ Study is part of the continuing USAF participation in the local planning process. It is recognized that, as local communities prepare land use plans and zoning ordinances, the USAF has the responsibility of providing inputs on its activities relating to the community. This study is presented in the spirit of mutual cooperation and assistance by Dyess AFB to aid in the local land use planning process.

This study updates information base flying activities since 2008. Noise contours portrayed on the AICUZ maps in this study are based on current mission plans.

Data collection was conducted at Dyess AFB in October 2013. Aircraft operational and maintenance data was obtained to derive average daily operations by runway and type of aircraft. This data was supplemented by flight track information (where we fly), flight profile information (how we fly), and ground run-up information. After verification for accuracy, data

was input into the NOISEMAP program to produce DNL contours. Contours were plotted on an area map and overlaid with CZ and APZ areas. All references to the current study throughout this document cite the year as 2013 because all the collected data were validated and processed in 2013. Appendix A contains detailed information on the development of the AICUZ Program.