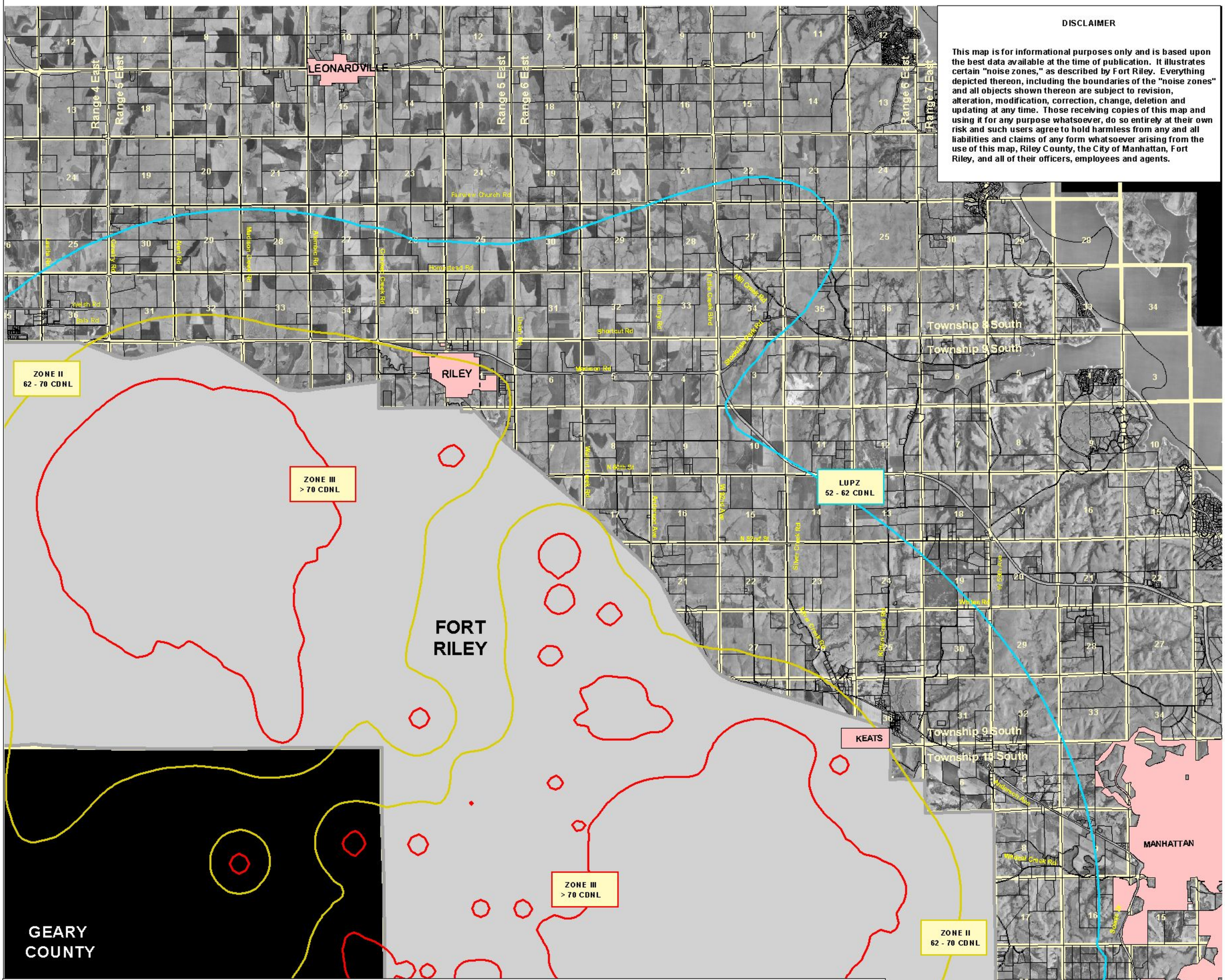
PROJECTED FORT RILEY NOISE CONTOURS



DISCLAIMER

This map is for informational purposes only and is based upon the best data available at the time of publication. It illustrates certain "noise zones," as described by Fort Riley. Everything depicted thereon, including the boundaries of the "noise zones" and all objects shown thereon are subject to revision, alteration, modification, correction, change, deletion and updating at any time. Those receiving copies of this map and using it for any purpose whatsoever, do so entirely at their own risk and such users agree to hold harmless from any and all liabilities and claims of any form whatsoever arising from the use of this map, Riley County, the City of Manhattan, Fort Riley, and all of their officers, employees and agents.

EXPLANATION

The noise zones on this map represent various noise levels expected to be generated by large caliber weapons firing at Fort Riley. The zones reflect noise varying from peak bursts to relative quiet in a single numeric measurement. The noise zones represent all weapons firing that occur at Fort Riley - 24 hours a day, seven days a week. That number is divided by 365 days to provide an average noise measurement.

Noise is measured in decibels (dB). The most widely accepted descriptor for noise is the day-night level (DNL). DNL takes into account noise occurring during night time hours and adds a 10 dB penalty. DNL is the standard, accepted methodology for modeling noise impacts on lands surrounding military installations.

Blast noise from large caliber weapons is noise of short duration (typically less than one second) of especially high intensity, with abrupt onset and rapid decay. Noise generated by firing large weapons systems is measured by using a "C-weighting." The DNL of blast noise is expressed as CDNL. Though the impulsive noise associated with large weapons systems can cause vibration that may make nearby buildings shake, the noise is air-borne. Vibration is not transmitted through the ground as a result of mortar or artillery impact on Fort Riley, but instead travels through the air as a shock wave. It is this wave that causes vibration and windows to rattle. People tend to find large caliber blast noise more annoying that small arms noise.

The Environmental Noise Program, US Army Center for Health Promotion and Preventive Medicine used Fort Riley's weapons firing data to create the following noise zone map. The following provides explanation of the various noise zones:

Noise Zone III. This zone consists of the area around the source of the noise in which the CDNL exceeds 70 dB. Guidance indicates that noise in this zone is severe enough to cause conflicts with almost all activities, particularly sensitive land uses, such as housing, schools, medical facilities, and places of worship. Currently Noise Zone III does not occur off the installation.

Noise Zone II. This zone consists of an area where the CDNL is between 62 and 70 dB. Guidance deems noise exposure within this area to be significant and recommends limiting land use to non-sensitive activities such as industry, manufacturing, transportation and agriculture. Guidance also suggests that if residential uses are deemed necessary in this zone, that the design and construction of the buildings incorporate noise level reduction (NLR) features to minimize the annoyance experienced by residents.

Noise Zone I. This zone includes areas around the noise source where CDNL is less than 62 dB. This area is usually suitable for all types of land use activities and does not appear as a specific noise zone on the map.

Land Use Planning Zone. The noise environment at the installation varies daily and seasonally, because operations are not consistent 365 days a year. To provide a planning tool that can be used to account for days of higher than average operations a Land Use Planning Zone (LUPZ) is included on the noise zone maps. In the LUPZ, 62 dB CDNL represents an average that separates the normally incompatible Noise Zone II from the compatible Noise Zone I. The LUPZ encompasses areas where, during periods of increased operations, community annoyance levels can reach those associated with Zone II.

The LUPZ can offer a prediction of noise impacts when levels of operations are above average. While residential and other noise sensitive land uses may generally be compatible with the typical noise levels present within a LUPZ, potential increased annoyance levels during training operations may warrant the utilization of design and structural NLR measures, to reduce interior noise levels during periods of increased military operations. Additionally, low residential densities are warranted within the LUPZ to reduce the likelihood of potential future land use conflicts.

SOURCE: The Flint Hills Joint Land Use Study (JLUS), a report prepared by EDAW, Inc. following a collaborative planning effort among the local governments of Clay, Geary, and Riley Counties; the cities of Grandview Plaza, Junction City, Manhattan, Milford, Ogden, Wakefield and Riley; and Fort Riley representatives. For more information on the various noise zones and potential land use restrictions in Riley County or the City of Manhattan, please contact Riley County Planning & Development at (785) 537-6332, City of Manhattan Community Development at (785) 587-2412 or the Fort Riley Public Affairs Office (PAO) at (785) 239-4310.

LEGEND

Projected Noise Contours
- LUPZ
- ZONE II
- ZONE III

Fort Riley Boundary

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June 28, 2006