

Fort Riley Large Arms Blast Noise

Military training creates noise both day and night. Sound is measured in decibels (dB). One widely accepted descriptor of noise created by large caliber weapons firing and other loud blasts is the Concussion-Weighted Day-Night Level (CDNL) metric. Another is the single blast event peak noise metric, PK 15(met). The noise will change over time as firing locations, firing frequency, ammunition, and weapons systems change.

The Concussion-Weighted Day-Night Level (CDNL) metric predicts the average noise levels generated by large caliber weapons firing.

A 10 dB penalty is added to noise created at night to account for it being more obvious during evening hours.

Noise Zone III – CDNL exceeds 70 dB. Generally considered to conflict with almost all land uses including housing, schools, medical facilities, and places of worship.

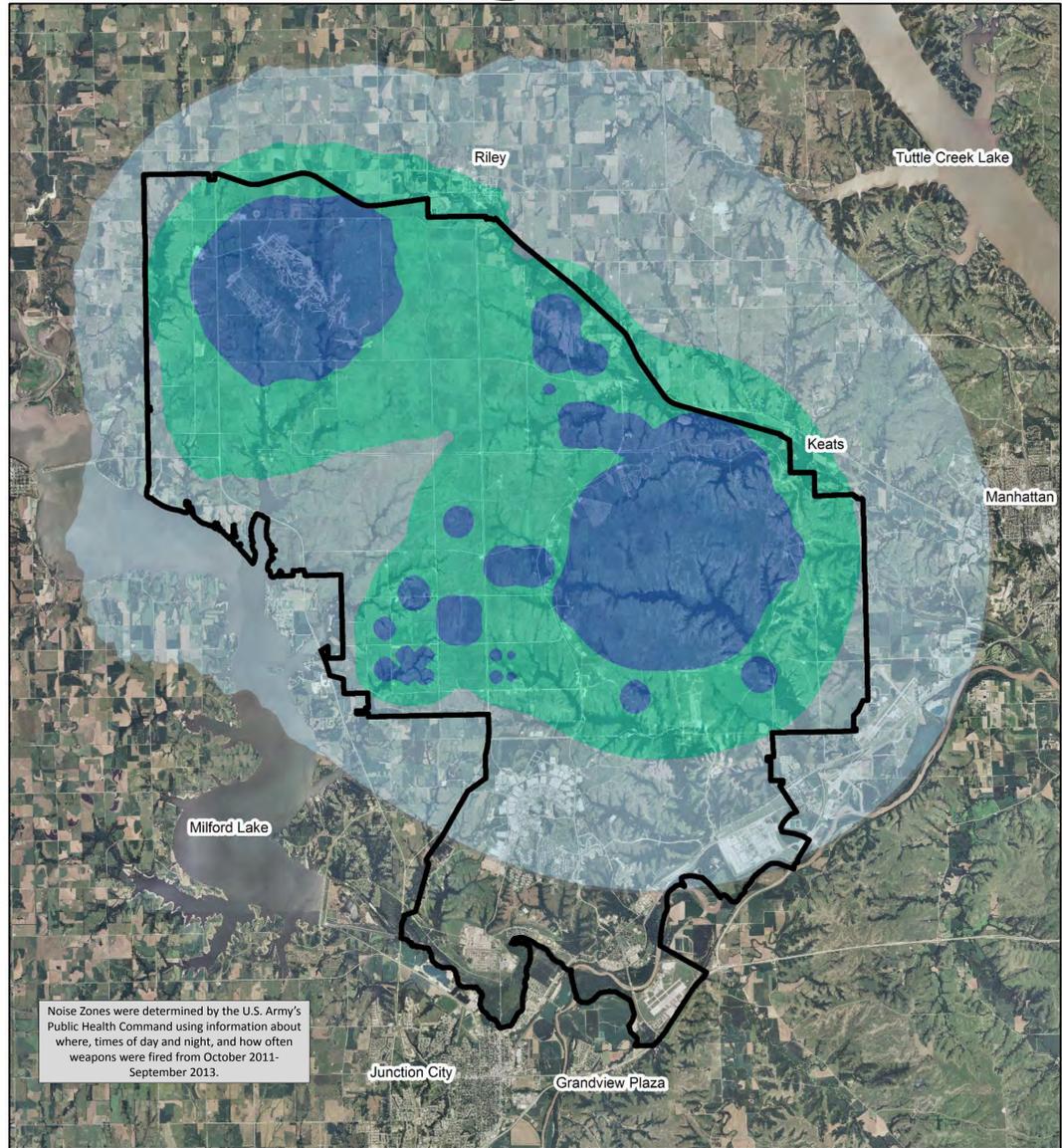
Noise Zone II - CDNL between 62 and 70 dB. The Army recommends limiting the use of land in this to activities that are not noise-sensitive - such as industry, manufacturing, transportation and agriculture.

Noise Zone I – CDNL less than 62 dB. This zone 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 (LUPZ) – CDNL between 57 dB and 62dB. This zone is a planning tool. The LUPZ encompasses areas where, during periods of increased military operations, noise levels can reach those associated with Zone II.

While residential and other noise sensitive land uses are generally compatible with the typical noise levels present within a LUPZ, potential increased annoyance during training operations may warrant the utilization of design and structural measures, to reduce interior noise levels in structures used for noise sensitive activities. Additionally, low residential densities are warranted within the LUPZ to reduce the likelihood of land use conflicts.

Average Noise



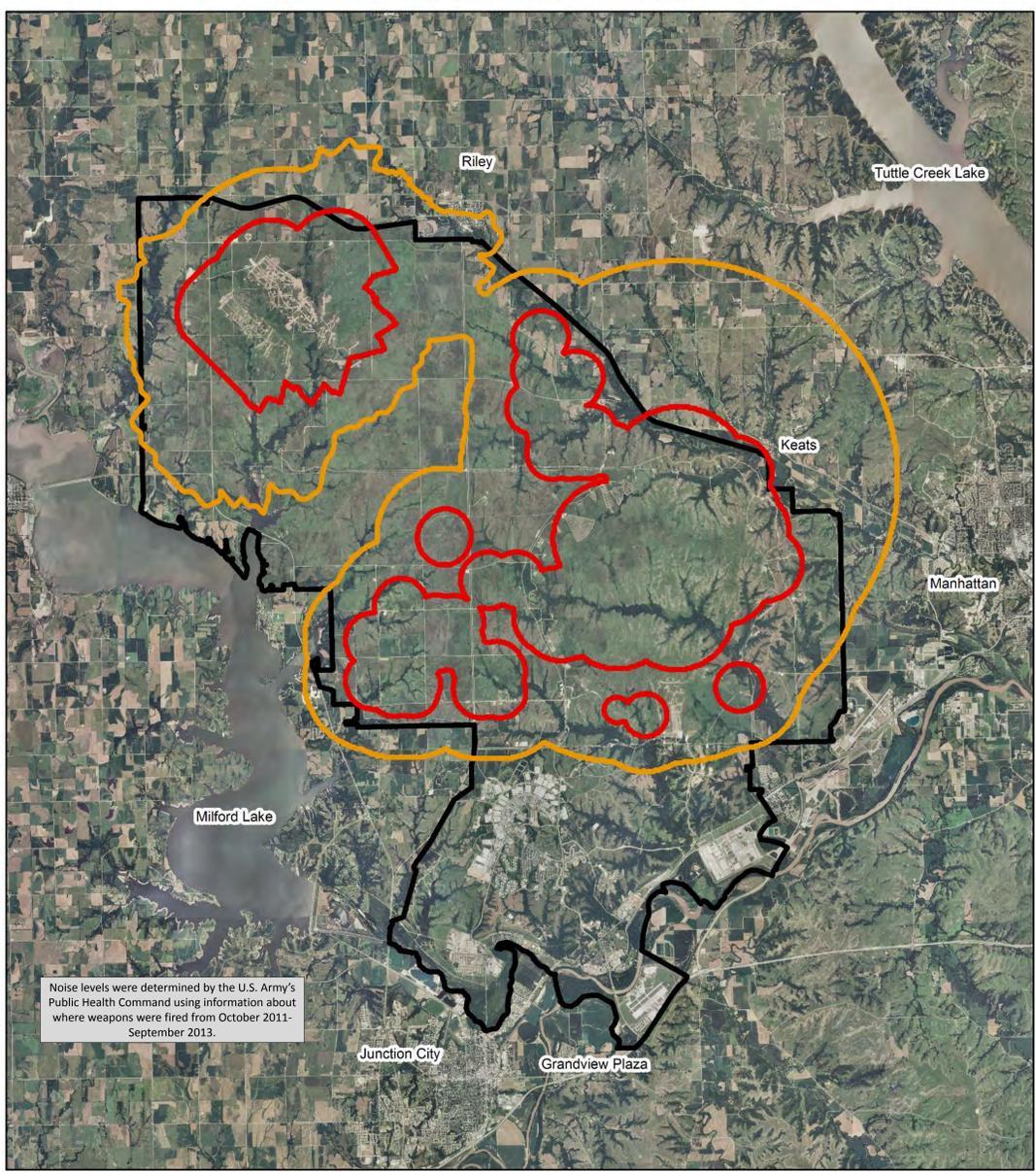
Noise Zones were determined by the U.S. Army's Public Health Command using information about where, times of day and night, and how often weapons were fired from October 2011-September 2013.

Legend

- Fort Riley Boundary
- LUPZ
- Zone II
- Zone III

Created By: Fort Riley DPW, Environmental Division
 Created: 2016
 Source: 2015 Installation Operational Noise Management Plan; CDNL Noise Zones
 Imagery Date: 2010

Peak Noise



Noise levels were determined by the U.S. Army's Public Health Command using information about where weapons were fired from October 2011-September 2013.

Legend

- 115 dB
- 130 dB
- Fort Riley Boundary

Created By: Fort Riley DPW, Environmental Division
 Created: 2016
 Source: 2016 Noise modeling conducted by US Army's Public Health Command using firing data from Oct 2011-Sept 2013
 Imagery Date: 2010

PK15(met) predicts the peak sound level that is likely to be exceeded only 15% of the time when a single weapon is fired a single time from a particular point and meteorological conditions are conducive for transmission of the sound.

PK15(met) does not give an indication of how frequently the weapons are fired, only the most frequently expected peak noise level when they are.

For more information please contact the Fort Riley Public Affairs Office at (785) 239-4310.

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