

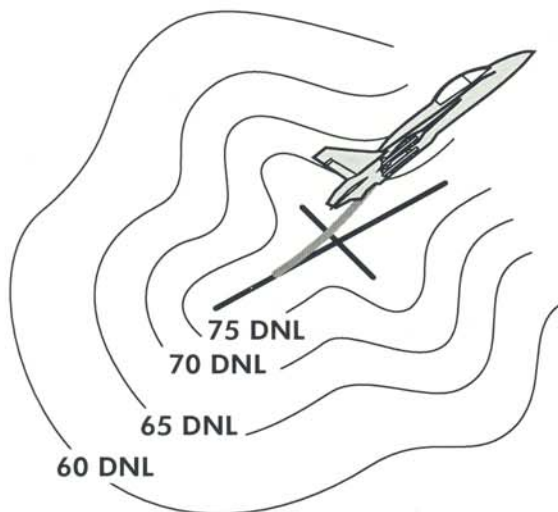
Fact Sheet on Proposal for Outlying Landing Field (OLF): Noise Summary

North Carolina OLF Study Group • Elizabeth City, NC • October 23, 2007

Noise is measured in A-weighted decibels abbreviated as dBA and commonly shortened to dB. A dB is a unit of sound pressure with greater intensity than the ambient, or background, sound. It is the unit of measure that best reflects the range of human hearing. The smallest increase in noise levels that is perceptible to the human ear is generally a 3-dB noise increase. The Navy measures noise levels of aircraft operations using two common noise metrics: the day-night average sound level (DNL) and the sound exposure level (SEL).

Day-Night Average Sound Level (DNL)

The day-night average sound level (DNL) is the average of all sounds made over a 24-hour period. DNL accounts for the maximum noise levels, the duration of the operations, and the number of operations that occur over a 24-hour period.



The DNL is depicted as a continuous contour line around a noise source usually with 5-dB increments between the contours. The area between two noise contours is known as a noise zone. The U.S. Environmental Protection Agency, Federal Aviation Administration, and Department



of Defense use this metric to recommend what land uses are compatible within specific noise zones.

- **Noise Zone 1** (less than 65 dB DNL) is generally considered an area of low or no noise impact. Social surveys have shown that less than 15% of the population would be expected to be highly annoyed. However, studies have shown that people living in rural areas are used to low ambient noise levels and perceive impacts at DNL levels less than 65 dB DNL.
- **Noise Zone 2** (65 to 75 dB DNL) is an area of moderate impact where some land use controls are recommended. Social surveys have shown that between 15% and 39% of the population would be expected to be highly annoyed.

