

**Bud Baeslack**

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**From:** Wes Butch [wbutch@dlz.com]  
**Sent:** Friday, September 10, 2004 4:15 PM  
**To:** Bud Baeslack  
**Cc:** Douglas Hammon; Jason Whitten  
**Subject:** DNL information

Bud -

Good to meet you today - nice job on the presentation. Here is some language referencing some of the studies that substantiate the use of 65 DNL by FAA as their impact threshold. If you need more details, let me know and I'll get in touch with the Wyle people who are the real technical experts on the issue. Clearly the maximum levels associated with single events are important and should be considered, but after decades of study, DNL has remained the best overall descriptor.

Wes

Extensive research has found that the DNL correlates very well with community annoyance from most environmental noise sources. A DNL of 65 dB is generally identified as the threshold level of aviation noise, and other sources of community noise, which are "significant". Recent studies continue to indicate that DNL is the descriptor of choice in representing community reaction to noises of all kinds. A recent study to assess the nighttime weighting factor used in DNL concluded that there is no credible evidence to use anything other than the accepted DNL ("Cumulative Airport Noise Exposure Metrics: An Assessment of the Evidence for Time-of-Day Weightings," DOT/FAA/EE-86/10). Another study concluded that DNL satisfactorily represented surveyed community annoyance from helicopter noise for flyovers as infrequent as one operation per day ("A Community Survey of Helicopter Noise Annoyance Conducted under Controlled Noise Exposure Conditions," NASA Tech. Memo 86400). Based on this situation, the DOT, HUD, DOD and EPA have determined that a 65 DNL dB is the threshold of significance for determining compatible land uses.

There are also EPA studies from the 1970s and more recent studies by FICAN (the Federal interagency committee studying noise issues) that support use of DNL as the best overall descriptor for annoyance.

3/28/2005