

A Case for Buffer Zones

By

William Albee

Special Projects Director , Acoustics Group
Wyle Laboratories, Inc ■ Arlington, VA 22202

(703) 415-4550

www.wyleacoustics.com

February 2003

The Federal Guidelines

One of the primary drivers of noise controversy around airports is the lack of buffer zones between the areas near airports where noise-sensitive land use is not compatible and areas that are regarded under Federal guidelines as fully compatible for noise sensitive development. The U.S. Federal Aviation Regulations, Part 150, Land Use Compatibility Guidelines define noise-sensitive land uses above a Day/Night Average Noise Level (DNL) of 65 decibels (dB) to be non-compatible with airports, and noise-sensitive uses below DNL 65 dB are considered to be compatible *“without restrictions.”* So on one side of that pencil thin line on a map, the FAA (and other Federal agencies) regards noise to be so intrusive that Federal funding is provided to sound insulate or possibly acquire residences and other noise-sensitive structures, such as schools, churches and hospitals. Step across that line on the map, and Federal guidelines imply that noise sensitive development is perfectly *“OK”* without restriction. By that logic, the resident on one side of the street qualifies for noise reduction treatments that cost the taxpayers \$30-35K, while the resident a few feet away on the other side of the street qualifies for nothing. Doesn't common sense and logic say that there is a gray area between these areas, where if noise sensitive development is permitted, it should only occur *“with restrictions?”*

What Factors are Creating the Controversy?

The U.S. Environmental Protection Agency (EPA) said in recent comments to FAA's Environmental Impact Statement for the expansion of a runway at

Fort Lauderdale-Hollywood International Airport that more steps must be taken to protect neighborhoods from expected increases in airplane noise. Airport plans call for buying out all homeowners within the DNL 70 dB contour and the sound insulation of residences in the DNL 65 to 70 contours, but the EPA said homes with the DNL 65 dB contour should be bought out rather than sound insulated. In EPA's view, the noise burden is so significant, that acquisition rather than sound insulation is necessary at exposure levels above DNL 65 dB around that airport. Yet they offer no comment regarding existing or future noise sensitive development just outside that contour. *What were they thinking?* How can it be so bad on one side of that line that EPA believes that residents should be removed at Federal expense, but on the other side of that line they offer no recommendations or even advice for restrictions or mitigation?

The reality is that U.S. Federal agencies under the Constitution must leave it entirely up to state and local jurisdictions to establish local noise standards and to decide if they want to impose any restriction on development at, above or below the *“significant”* noise impact threshold of DNL 65 dB. Local jurisdictions are faced with pressure from developers and the need to maximize their tax bases to develop right up to the non-compatible noise boundary. They have little incentive to establish buffer zones just outside the DNL 65 dB contours to address the considerable or *“moderate”* noise exposure in those areas, because many will be out of office by the time these areas are developed and the new residents begin to complain about the noise. It is convenient to approve the development and then blame the Federal land use compatibility guideline when citizens residing in these adjacent areas complain.

How Much Buffer is Enough?

When considering local noise standards for noise overlay zoning around airports it would seem logical for all affected jurisdictions in cooperation with the airport officials to either:

- Define a long-range (20+ years) noise exposure area (contour) within their respective jurisdictional boundaries that includes a reasonable buffer zone so that noise-sensitive development would not likely be controversial immediately adjacent to the noise exposure area boundary, or
- Define a noise exposure boundary within which no new noise-sensitive development is permitted, and define one or more outer boundaries to create a buffer zone(s) in which new noise-sensitive development is permitted, but only if specified restrictions are met. Such restrictions might include aviation easements, extra sound insulation, and/or real estate disclosure of noise exposure levels prior to the transfer of the property. The outermost boundary should be the locally determined noise exposure contour beyond which noise-sensitive development is deemed to be fully compatible without restriction.

Two major U.S. airports — Minneapolis and Cleveland — recently recognized that noise below DNL 65 dB must be acknowledged and addressed. Both have chosen to extend their sound insulation programs out to the DNL 60 dB noise contour, with at least a minimal treatment program. These actions constitute a buffer through the establishment of a local airport noise exposure standard of DNL 60 dB, rather than the usual deference to FAA's DNL 65 dB guideline.

Two other major airport jurisdictions have responded in a different way. The City of Orlando, FL and Loudoun County, VA have both enacted noise overlay ordinances that require noise-level disclosure and also require new noise-sensitive structures to achieve a specified noise level reduction. These ordinances establish buffer zones that impose certain

restrictions on noise-sensitive development in the area between the zone that is non-compatible and the fully compatible areas beyond. The Loudoun County boundary extends to ½ mile beyond the DNL 60 dB contour and Orlando's outer boundary is the DNL 55 dB contour.

The first step to compatible land-use development near airports in the long run is for all local officials in affected jurisdictions to fully understand and accept that it is their sole responsibility to determine what areas within their respective jurisdictions are non-compatible, compatible only "with restrictions," and compatible "without restrictions."

Since there is constant turnover in local elected officials, a continuing effort to educate these officials regarding their responsibility to effectively zone around their airports in a way that will achieve an appropriate balance between development interests and the long-term aviation needs of the geographic area. The Federal government, airport officials, aviation industry officials, and airport consultants all share in the responsibility to make sure the responsible elected officials in the jurisdictions they affect are sufficiently informed on aviation noise impacts to fulfill their responsibility to zone effectively to protect the interests of all stakeholders. Only with the full cooperation and participation of all stakeholders can the urgently needed buffer zones be effectively established around the nation's airports.

A Call to Action

Of course the necessary action is not going to occur at the urging of the lone voice of an ex-FAA noise policy official (the author). Only if the FAA (in cooperation with the EPA and other interested Federal agencies) affects the necessary policy and regulatory changes will large numbers of local jurisdiction move quickly to establish the needed buffer zones. FAA should consider issuing guidelines to state that moderate levels of noise exposure exist immediately outside the DNL 65 dB contours and to urge that local officials consider

imposing restrictions on noise sensitive development in those areas. FAA guidelines should specifically recommend that local jurisdictions:

- Establish buffer zones,
- Determine what restrictions on noise sensitive development to impose within those boundaries,
- Include sufficient area to make each buffer zone effective.

The FAA guidelines should also identify a range of restrictions for local jurisdictions to consider and suggest which restrictions to consider at various levels of moderate noise exposure.

The good news is that because zoning authority is local, anyone with a vested interest in creating a buffer zone around their airport need not wait for a change in national noise policy or regulations in order to initiate effective action. So what are you waiting for? Go form a committee to examine what buffer zoning is needed around your airport and get all the stakeholders involved in the dialogue. The longer you wait, the more development will encroach on your airport. Buffer zones are the only effective way to reduce the number of future noise complaints that are sure to occur in those areas near the DNL 65 dB contours if elected officials and the Federal government continue to regard them as **fully compatible** "without restrictions."

Note:

Mr. Albee is retired from the FAA where he spent 10 years as Manager, Policy and Regulatory Division in the Office of Environment and Energy. He also served as FAA's first Aviation Noise Ombudsman.