

INTRODUCTION

Noise is considered a major source of environmental pollution because it represents a threat to the serenity and quality of life in urban population centers. The U.S. Department of Housing and Urban Development (HUD) made this finding as stated in *The Noise Guidebook*, and accordingly evaluates any proposed housing assistance with regard to noise levels and exposure.

With noise levels increasing at an average of one decibel per year, there is a need to understand the implications of noise and the appropriate standards for noise control.

EFFECTS OF NOISE

According to *The Noise Guidebook*, noise pollution can either be a nuisance or hazard. Both can effect human life.

Noise pollution as a nuisance:

- ◆ causes loss of concentration;
- ◆ makes people irritable;
- ◆ may decrease productivity; and,
- ◆ disrupts comfort and enjoyment.

Noise pollution as a hazard:

- ◆ can cause loss of hearing;
- ◆ becomes a safety hazard; and,
- ◆ can be a factor among diseases including:
 - ◆ peptic ulcers;
 - ◆ high blood pressure;
 - ◆ migraine headaches;
 - ◆ nervous disorders; and,
 - ◆ hypertension.

As the community continues to expand, more and more sources of noise pollution will come into existence. The major contributors to a community problem are transportation sources such as highways, railroads, and airports. Larger jets could be landing at the airport and heavier traffic on bigger and newer roads will cause more noise. To prevent adverse effects, consideration must be given to noise standards, particularly around the airport. Additional information may be found regarding noise levels around the Owensboro-Daviess County Regional Airport by consulting Section 530 of this plan.

NOISE STANDARDS

State standards on noise levels have not been established. The Environmental Protection Cabinet presently serves only as an advisory group to local governments seeking assistance in preparing noise ordinances for their communities. Local standards for Owensboro-Daviess County do not exist. However, according to *The Noise Guidebook*, agencies like HUD and Farmers Home Administration have developed regulations which are related to the overall community noise level; but they only affect their own programs and are not binding on local communities. HUD has published recommended standards and guidelines for communities to use in attempting to control noise pollution:

Clearly Acceptable

Noise exposure is such that both the indoor and outdoor environments are pleasant.

Discretionary

Normally Acceptable

Indoor environments would be acceptable, while outdoor environments would be acceptable for play and recreation.

Normally Unacceptable

Unusual and costly building construction becomes necessary to assure some tranquility indoors, screening needed for outdoors.

Clearly Unacceptable

The noise exposure is so severe that the construction costs to make the indoor environment acceptable would be prohibitive and the outdoor environment would still be intolerable.

When evaluating particular sites for noise levels, the least favorable category is used for the rating. For example, if two roads intersect, the road with the highest noise level would be used to determine the acceptability of development for that site.

The following two exhibits illustrate noise exposure limits and relative noise levels.

Exhibit 791-T1: Walsh-Healey Exposure Limits

Noise Level (dBA)	Maximum Time Exposure
Below 90	Unlimited
90 to 92	6 Hours
92 to 95	4 Hours
95 to 97	3 Hours
97 to 100	2 Hours
100 to 102	1.5 Hours
102 to 105	1 Hour
105 to 110	0.5 Hour
110 to 115	0.25 Hour
Above 115	None

Source: Walsh-Healey Public Contracts Act 1965

Exhibit 791-T2: Relative Noise Levels in Decibels

0	Threshold of Hearing	80	School cafeteria
10	Leaves rustling in wind	90	Noisy urban street (Danger level)
20	Whisper	100	Auto horn 10 inches away
30	Average residence w/o stereo playing	110	Motorcycle
40	Soft radio music in apartment	120	Hard rock band
50	Quiet urban street	130	Threshold of pain
60	Normal conversation	140	Near jet engine
70	Stenographic room	180	Lethal level

Source: *The Noise Guidebook*

LOCAL EFFORTS

Since standards have not been set at the state or local level, several policies can be utilized for keeping noise levels acceptable. Site review, greater lot depths and landscape buffer ordinances have proved beneficial to the reduction of noise levels.