

SOUND SOLUTIONS

ENVIRONMENTAL NOISE CODES & ORDINANCES

No. 6

There are several different codes, regulations, and ordinances dealing with environmental noise. Some of these are simply established guidelines for land uses planners, but others are legally binding ordinances, and violations of these ordinances may result in substantial fines or even more severe penalties. The following paragraphs describe some of these regulations which are enforced by state and local governments. Feel free to contact my office if you have any questions regarding any of these regulations.

Environmental Noise Ordinances

The Washington State noise ordinance (WAC 173-60) identifies specific legal limits on noise transmission from one property to another during any one hour of the day. The allowable noise levels vary with the zoning of both properties as well as the time of day (see table below):

Allowable Noise Levels (dBA)

Source Zoning	Receive Property Zoning		
	Residential*	Commercial	Industrial
Residential	55	57	60
Commercial	57	60	65
Industrial	60	65	70

* deduct 10 dBA for night hours (10 pm to 7 am)

The allowable noise level may be increased above these values by 5 dBA up to 15 minutes per hour, 10 dBA up to 5 minutes per hour, and 15 dBA up to 90 seconds per hour.

The most restrictive noise level standard is for a residential source and residential receiver during the night hours of 10 pm to 7 am. The noise limit for this situation is 45 dBA for a continuous noise. These noise levels must be met at any point on the receiving property. The State of Washington no longer provides enforcement for these regulations. They have left that up to the local governments. Many local governments (both county and city) have their own noise ordinances, and these should be consulted for specific projects within their jurisdiction.

Oregon has a similar law (DEQ 340-35) which is somewhat more restrictive. In addition to specifying the maximum allowable A-weighted noise levels, the Oregon law also limits the frequency spectrum of the noise source as measured on the receiving property. Unlike Washington, the Oregon law is enforced statewide by the Department of Environmental Quality (DEQ).

It is important to realize that certain noise sources are exempt from these requirements. These sources generally include (but are not limited to): motor vehicles (while operating on public highways), aircraft, railroad equipment, emergency equipment, and alarms.

Residential Development Restrictions

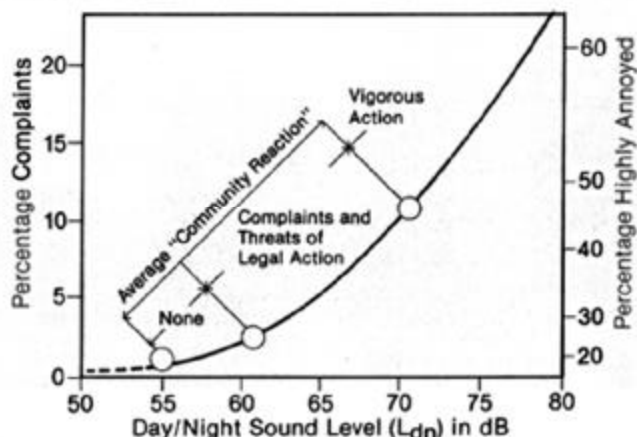
The Federal Government has established noise guidelines for residential developments within several different agencies. None of these are legally binding to prohibit developments, although they can have that effect if government financing is involved.

In 1972 the Environmental Protection Agency (EPA) established a recommended maximum exterior noise level of 55 Ldn for residen-

tial properties. This guideline was established even though the EPA recognized that nearly 50% of the U.S. population lives in areas where the noise level exceeds this value. Of course, this is not a legal limit, but the 55 Ldn does serve as a criterion below which noise should not become a detriment to residential land use. See graph below which relates Ldn noise level with acceptance by the general public.

HUD (Housing & Urban Development) will only provide financing for residential developments when the exterior noise level at the proposed site does not exceed 75 Ldn. In addition, if the exterior noise level is between 65 and 75 Ldn, HUD requires special construction methods as a prerequisite to secure financing.

The Federal Highway Administration (FHWA) has established their own noise criterion for residential developments near highways. The FHWA criterion is not a legal limit, but it is a limit for determining which projects can use federal funds for highway noise abatement. The FHWA noise criterion for residential properties is an hourly average noise level of 67 dBA, measured at the right-of-way during the peak hour for traffic noise. The peak hour for noise usually (but not always) occurs during the peak hour for traffic volumes.



Environmental noise restrictions on residential developments is a relatively new phenomenon. There are no statewide regulations on residential developments in noisy areas, but some local governments have created ordinances and policies for restricting developments on the basis of excessive noise.

For example, King County Ordinance No. 8184 restricts residential development in areas surrounding Sea-Tac airport. This ordinance provides for minimum building construction methods designed to achieve interior aircraft noise levels of 40 Ldn in bedrooms and 45 Ldn in living areas.

Another example is the Seattle-King County Health Department which regularly reviews residential building permit applications. If the proposed site is near a major street or highway (or other known noise source), the health department routinely requires the developer to provide a noise study prepared by an independent acoustical consultant that demonstrates that the exterior construction of the building(s) will be sufficient to provide an interior average noise level of 45 dBA in sleeping rooms and 55 dBA in other living areas.

The above information has been reviewed and is believed to be accurate, however we assume no responsibility for errors or omissions.