Types of Noise

Fixed Mechanical Noise and Garbage Collection Noise

The Department of Public Health has the primary responsibility for enforcing the provisions of the San Francisco Noise Control Ordinance that addresses fixed mechanical noise and garbage collection noise. Ventilation, air conditioning, and refrigeration noise associated with restaurants, markets, stores, banks, and other commercial facilities are a common source of complaint to the Health Department.

The Health Department proactively evaluates all plans for new restaurant and markets and requires compliance with the ordinance before opening. In addition, health inspectors respond to complaints and measure noise levels associated with mechanical equipment. Modern building codes require increased use of mechanical equipment for ventilation and air conditioning. Rooftop and rear yard noise associated with this equipment often intrudes into quiet backyards and bedroom locations resulting in annoyance and sleep disturbance.

Health Inspectors enforce noise standards to protect the public from these intrusions. The Health Department regulates noise associated with the collection of garbage and proactively inspects garbage collection vehicles for noise levels associated with hydraulic compaction systems. In addition, the program regulates hours of collection to minimize community noise impacts while still assuring the safe and efficient removal of solid waste and recycling.

Mixed Use Zoning

Perhaps the most problematic noises in San Francisco are those associated with such mixed-use conflicts as residential uses next to restaurants, automobile repair shops, or hospitals. Historically, zoning regulations were implemented to

avoid the incompatible proximal location of residential and commercial uses. However, many new residential condominiums have been built in close proximity to existing commercial and industrial uses. These conflicts include mechanical equipment noise, early morning delivery noise, loading and unloading of delivery vehicles, heavy truck backup beepers, and refrigeration equipment. Restaurant ventilation and refrigeration units are frequently installed close to apartment windows resulting annoyance and sleep disturbance. These conflicts can be mitigated through thoughtful planning and enforcement of building code acoustical standard.

New residential construction must be acoustically designed and constructed to reduce the intrusion of transportation noise and local fixed noise sources. The California Building Code, Section 1208A, Sound Transmission, requires acoustical evaluation and insulated building design and construction when exterior noise levels exceed 60 Ldn. The Department of Building Inspection oversees the implementation of these requirements. *(back to top)*

Construction Noise

Pounding hammers, screaming saws, and relentless heavy truck backup beepers are a common occurrence in many residential areas of San Francisco due to the flood of remodeling and new construction that is occurring in San Francisco. Construction projects can continue over many years and are permitted to operate between 7am and 8pm, seven days per week. Any work that occurs at night between the hours of 8pm and 7am requires a special permit from the Department of Building Inspection. San Franciscans that sleep during the day or have young children that rest during the day are particularly vulnerable to this intrusive noise. The Department of Building Inspection responds to complaints regarding construction hours and excessive noise from jack hammers on private property. The Department of Public Works, Street Division responds to complaints regarding construction on the public streets, sidewalks, and public right of ways. *(back to top)*

Traffic Noise

Traffic is the single greatest contributor to ambient noise levels in San Francisco. Streets with high volumes of trucks and busses are heavily impacted by elevated ambient noise. The acoustical energy in a heavy truck is often twenty times greater than that of a personal automobile. Elevated traffic volumes expose residents that live near highways and arterial streets to the highest noise levels in San Francisco and also to air pollutants that are associated with traffic. Noise associated with modified motorcycle mufflers is a significant problem for residents in San Francisco that live in nightclub areas that are visited by motorcyclists on the weekend.

Traffic noise can be decreased by slowing vehicle speeds, reducing number of vehicles, reducing trucks, increasing the use of overhead electric busses, and increasing the use of public transit, bicycles, and walking. In addition, the enforcement of motor vehicle noise regulations can dramatically improve noise associated with defective and modified muffler systems. *(back to top)*

Entertainment Noise
In 2004 the Entertainment Commission was created to oversee noise associated with amplified music in Places of Entertainment. There are five main considerations when evaluating entertainment noise problems:

- Construction and insulation of the place of entertainment
- Level of amplified noise which is permitted in the place of entertainment
- Proximity of residential neighbors
- Acoustical insulation of affected residential properties
- Lack of air conditioning in places of entertainment resulting in the need to open doors and windows

Article 1, Sections 47, 47.2, and 48 of the San Francisco Police Code regulates entertainment noise. These code sections are enforced by staff members of the Entertainment Commission. The Entertainment Commission and its staff may require acoustical insulation of Places of Entertainment and respond to complaints regarding entertainment noise. Noise associated with entertainment in the many San Francisco Parks is regulated by the Park and Recreation Commission. Permits for entertainment in the parks establish noise limits and hours of operation. *(back to top)*

Noise and Population Density
According to Demographia, San Francisco is the second most densely populated city over 400,000 people after New York. A study by the EPA in 1972 directly linked population density to noise levels. As we continue to increase density in order to accommodate more residential development we can expect the noise level to steadily increase. This is especially true when density is linked to automobile use as transportation is the number one contributor to ambient noise levels. *(back to top)*

Unregulated Noise Sources
The San Francisco noise ordinance was written in 1972 and a wide variety of new specialized noise sources have come on the market since that time.

- Noise from gas powered leaf blowers is a common complaint especially when operated in the early morning.

- Back up beepers on delivery trucks, garbage trucks, tractors, and construction vehicles.
- Pedestrian warning alarms on parking garage exits.
- Automobile car alarms.
- Extensive use of uncarpeted hardwood floors in rental housing creating transmission of foot to floor impacts is especially problematic with high heel shoes.
- Exterior bar patron conversations caused by outdoor smoking patios.
- New "talking" MUNI busses with compressed air kneeling interfere with neighborhood peace and quiet by inserting unusual amplified stop announcements and hissing noise from compressed air into normally quiet intersections in North Beach.
- Multiple vehicle fire and paramedic 911 responses with sirens and low frequency intersection clearance horns blasting especially in the Tenderloin. *(back to top)*